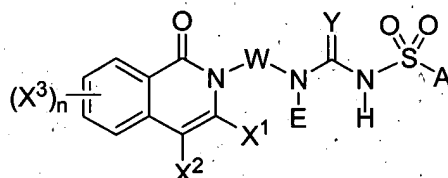


IN THE CLAIMS:

Please cancel claims 1-22 without prejudice and add new claims 23-38 to read as follows. All claims pending, including those unchanged by the present amendment, are reproduced below for the convenience of the Examiner.

1.-22. (Canceled)

23. (New) A compound of the following formula:



wherein:

A is thienyl, optionally substituted;

W is phenylene, optionally substituted;

E is selected from the group consisting of H,  $-C_1-C_8$  alkyl, polyhaloalkyl,

$-C_{3-8}$ -cycloalkyl, aryl, alkylaryl, substituted aryl, heteroaryl, and substituted heteroaryl;

n is an integer from 0-4;

each instance of  $X^1$ ,  $X^2$  and  $X^3$  is a member independently selected from the group

consisting of hydrogen, halogen, polyhaloalkyl,  $-OR^3$ ,  $-SR^3$ ,  $-CN$ ,  $-NO_2$ ,  $-SO_2R^3$ ,

$-C_{1-10}$ -alkyl,  $-C_{3-8}$ -cycloalkyl, aryl, aryl-substituted by 1-4  $R^3$  groups, amino,

amino- $C_{1-8}$ -alkyl,  $C_{1-3}$ -acylamino,  $C_{1-3}$ -acylamino- $C_{1-8}$ -alkyl,  $C_{1-6}$ -alkylamino,

$C_{1-6}$ -alkylamino  $C_{1-8}$  alkyl,  $C_{1-6}$  dialkylamino,  $C_{1-6}$  dialkylamino  $C_{1-8}$  alkyl,  $C_{1-6}$

alkoxy,  $C_{1-6}$  alkoxy- $C_{1-6}$ -alkyl, carboxy- $C_{1-6}$ -alkyl,  $C_{1-3}$ -alkoxycarbonyl,

$C_{1-3}$ -alkoxycarbonyl-  $C_{1-6}$ -alkyl, carboxy  $C_{1-6}$  alkyloxy, hydroxy, hydroxy  $C_{1-6}$

alkyl, and a 5 to 10 membered fused or non-fused aromatic or nonaromatic

18 heterocyclic ring system, having 1 to 4 heteroatoms independently selected from  
19 N, O, and S, with the proviso that the carbon and nitrogen atoms, when present in  
20 the heterocyclic ring system, are unsubstituted, mono- or di- substituted  
21 independently with 0-2 R<sup>4</sup> groups;

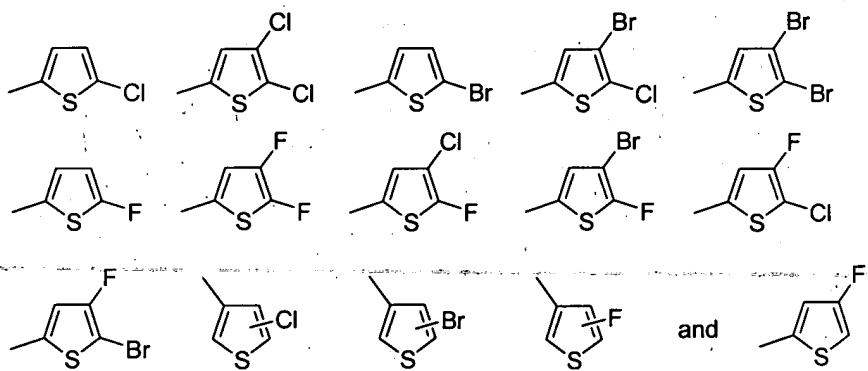
22 R<sup>3</sup> and R<sup>4</sup> are each independently selected from the group consisting of hydrogen,  
23 halogen, -CN, -NO<sub>2</sub>, -C<sub>1-10</sub> alkyl, C<sub>3-8</sub>-cycloalkyl, aryl, amino, amino-C<sub>1-8</sub>-alkyl,  
24 C<sub>1-3</sub>-acylamino, C<sub>1-3</sub>-acylamino-C<sub>1-8</sub>-alkyl, C<sub>1-6</sub>-alkylamino, C<sub>1-6</sub>-alkylamino C<sub>1-8</sub>  
25 alkyl, C<sub>1-6</sub> dialkylamino, C<sub>1-6</sub> dialkylamino C<sub>1-8</sub> alkyl, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub>  
26 alkoxy-C<sub>1-6</sub>-alkyl, carboxy-C<sub>1-6</sub>-alkyl, C<sub>1-3</sub>-alkoxycarbonyl,  
27 C<sub>1-3</sub>-alkoxycarbonyl-C<sub>1-6</sub>-alkyl, carboxy-C<sub>1-6</sub>-alkyloxy, hydroxy,  
28 hydroxy-C<sub>1-6</sub>-alkyl, -thio and thio-C<sub>1-6</sub>-alkyl;

29 Y is selected from the group consisting of O, S, N-OR<sup>5</sup> and NR<sup>5</sup>;

30 R<sup>5</sup> is selected from the group consisting of H, C<sub>1-10</sub> alkyl, C<sub>3-8</sub>-cycloalkyl, and CN;  
31 or pharmaceutically acceptable salts and prodrugs.

1 24. (New) A compound according to claim 23, wherein

2 A is selected from the group consisting of:

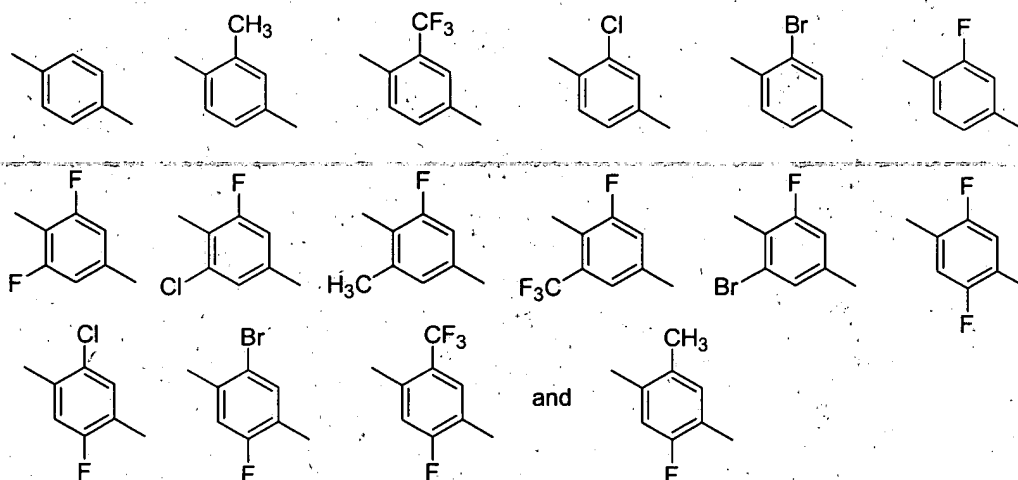


4 Y is selected from the group consisting of O, S, N-OR<sup>5</sup> and NR<sup>5</sup>;

5 E is selected from the group consisting of H, or C<sub>1-8</sub>alkyl; and

6 W is selected from the group consisting of:

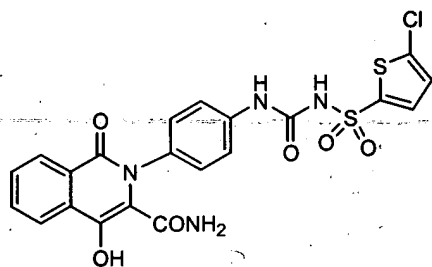
a'



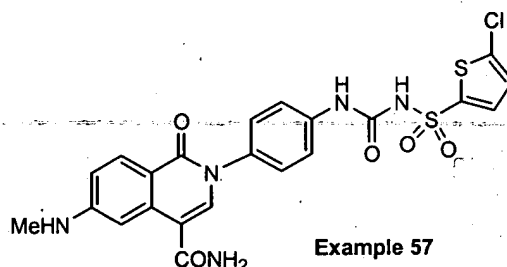
7

1

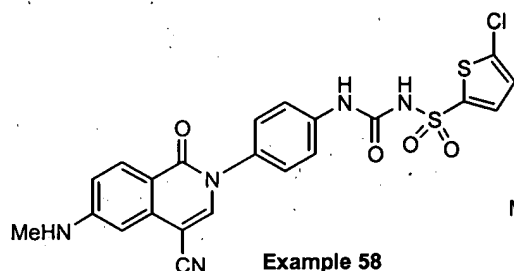
25. (New) A compound of claim 23, selected from the group consisting of:



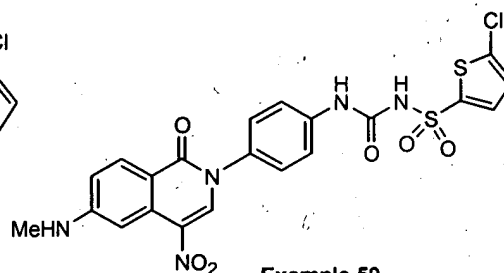
Example 56



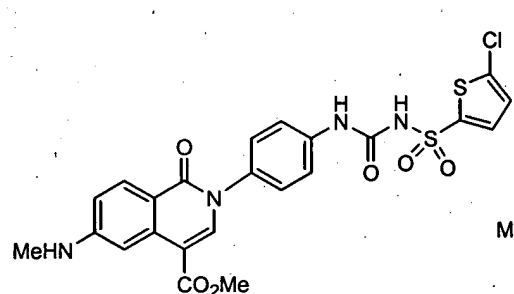
Example 57



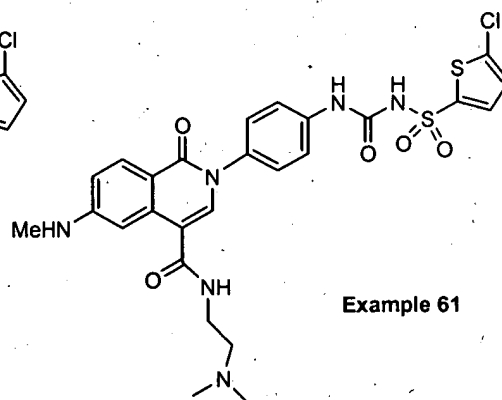
Example 58



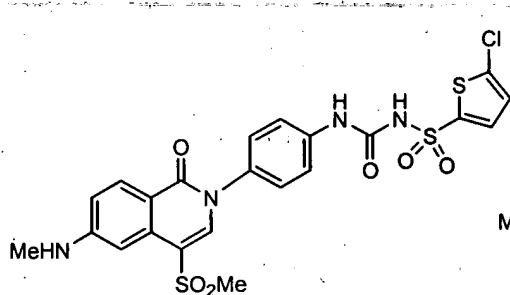
Example 59



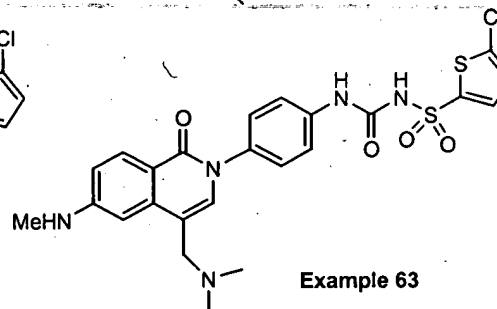
Example 60



Example 61

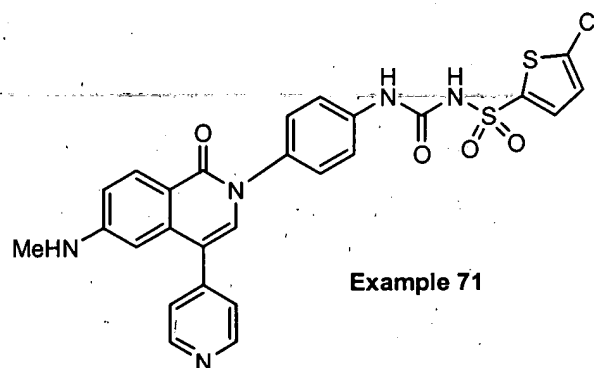
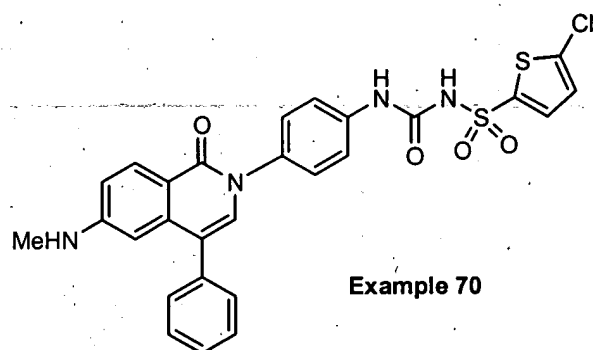
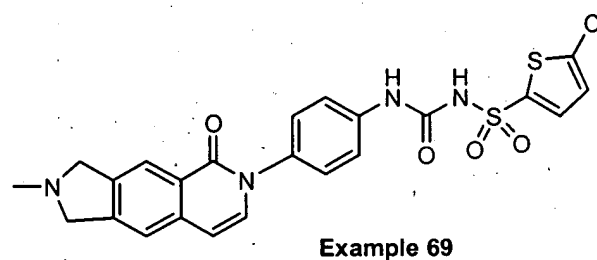
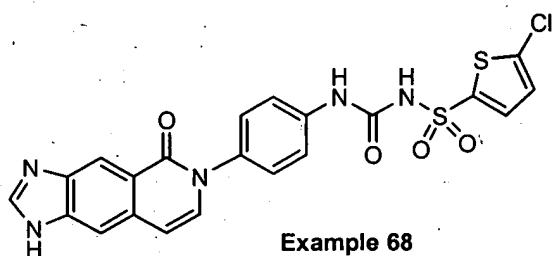
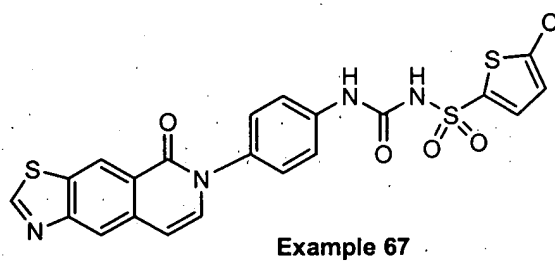
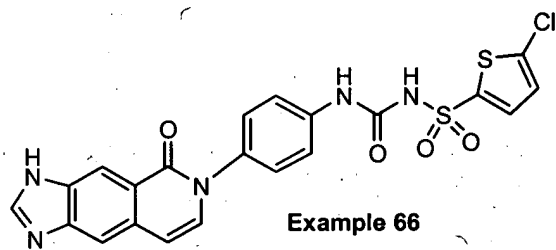
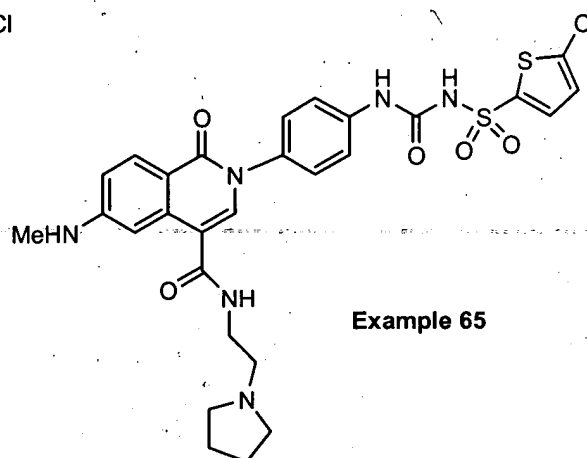
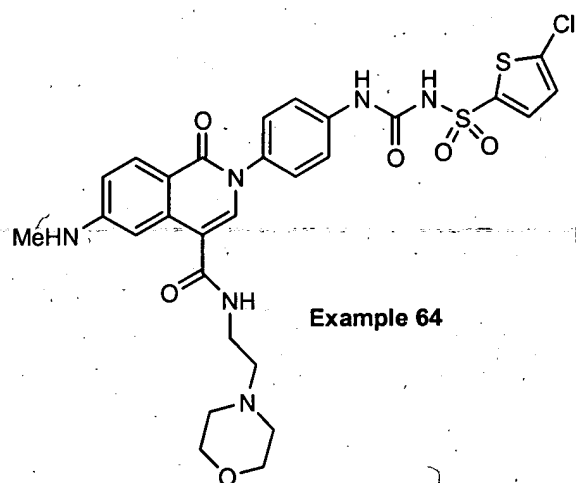


Examl 62

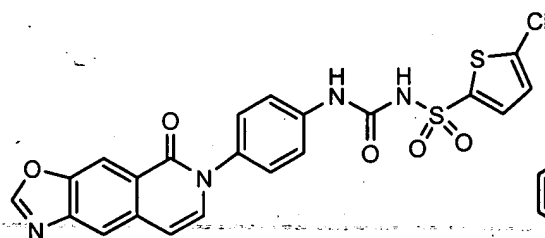


Example 63

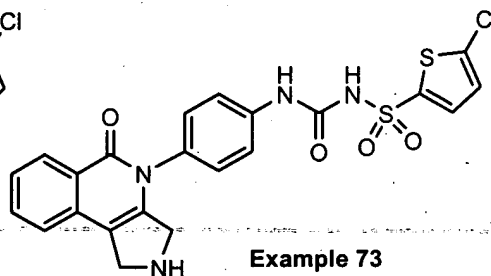
2



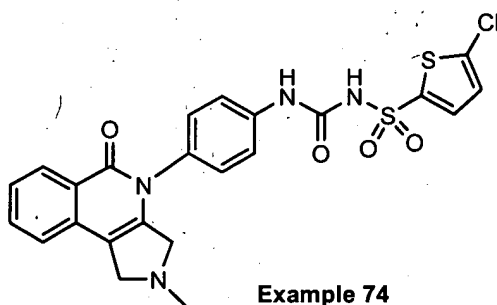
a'



Example 72

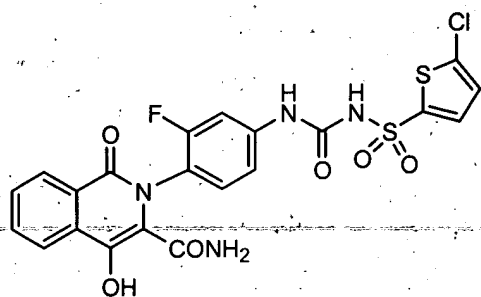


Example 73

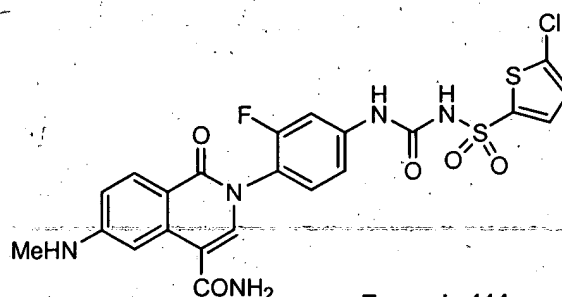


Example 74

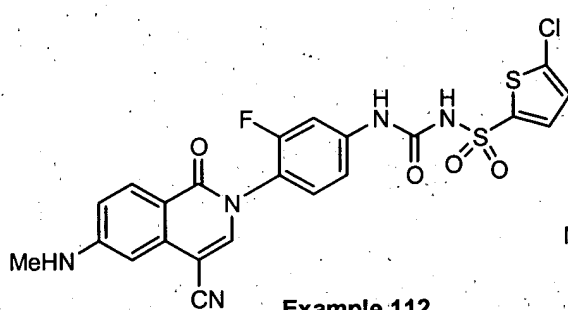
a1



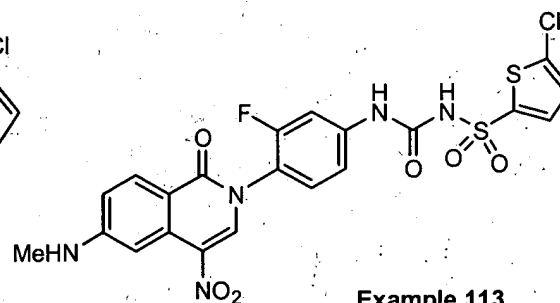
Example 110



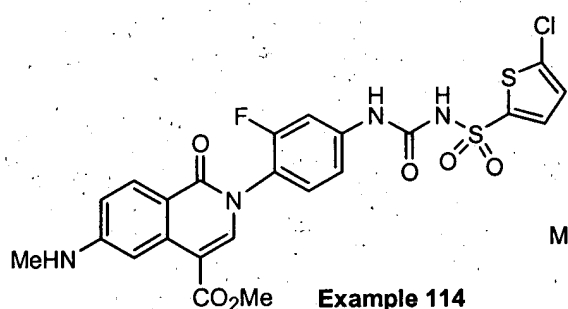
Example 111



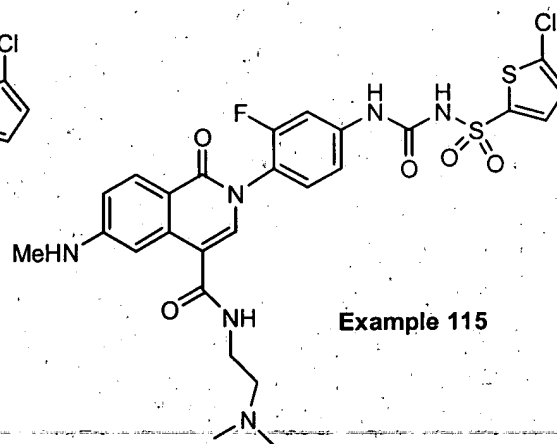
Example 112



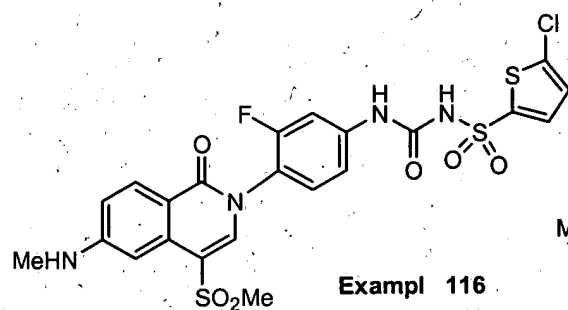
Example 113



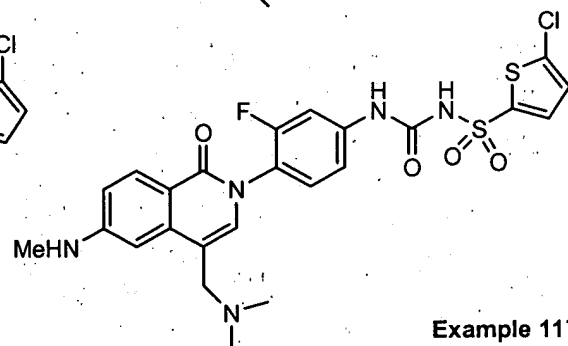
Example 114



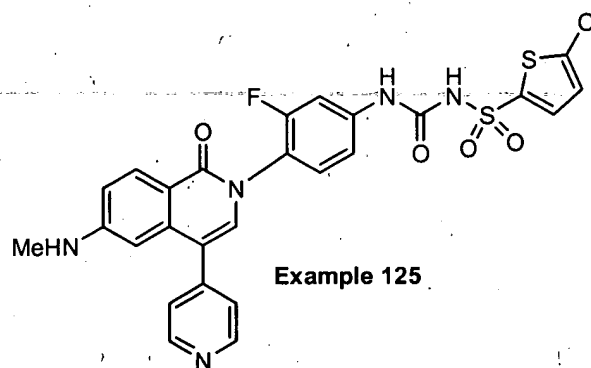
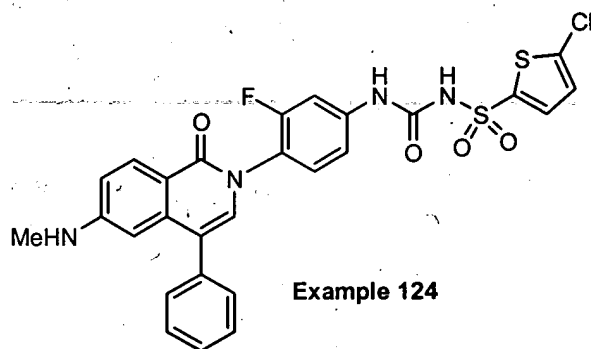
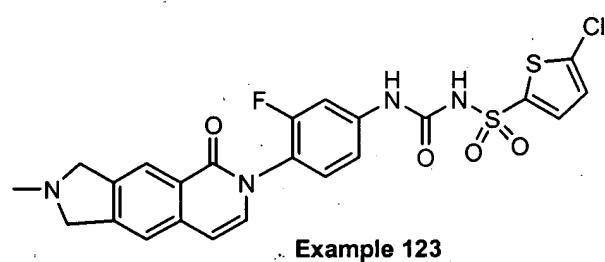
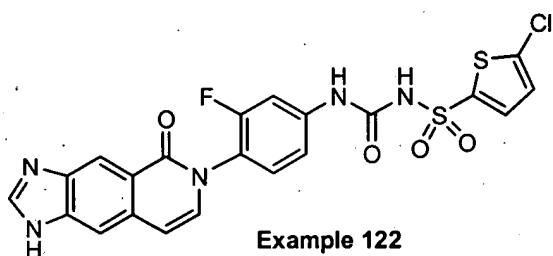
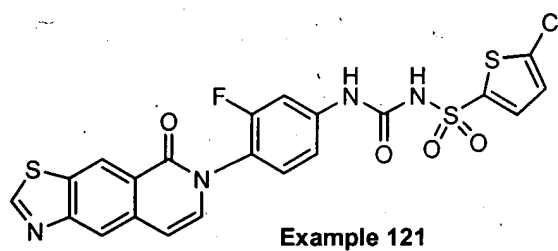
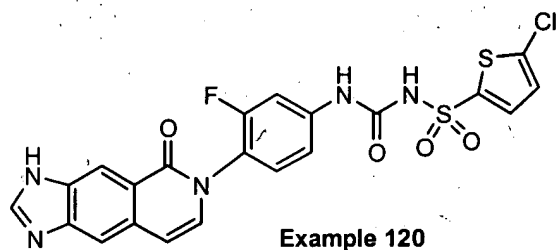
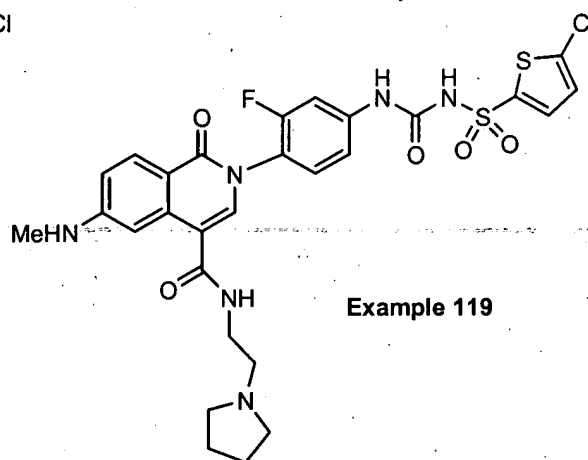
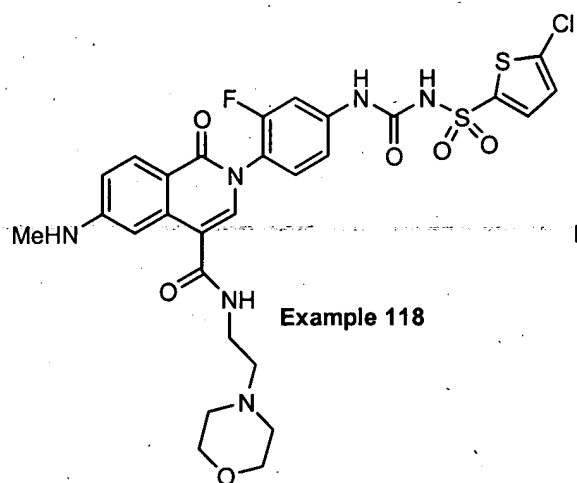
Example 115



Exempl 116

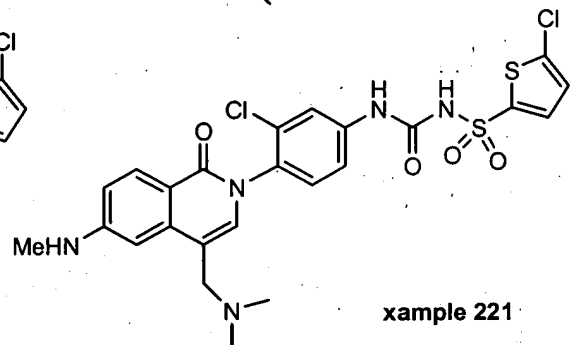
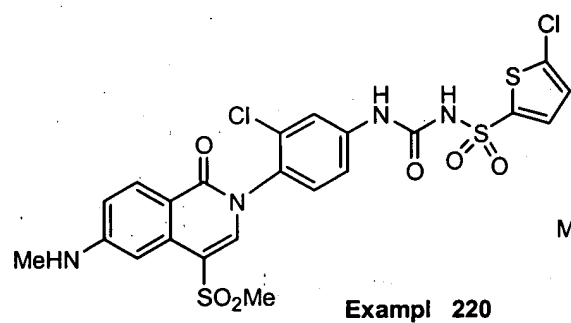
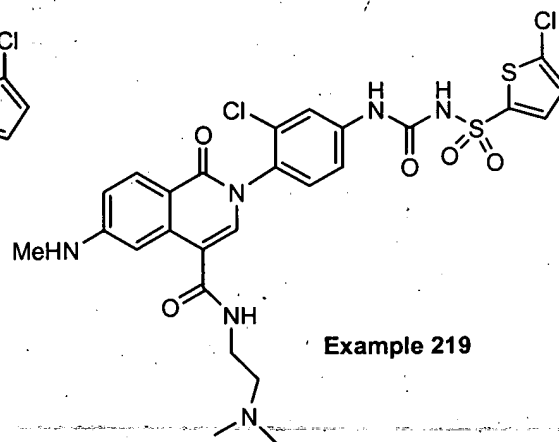
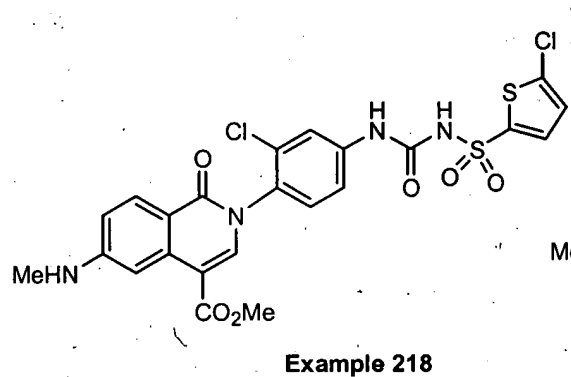
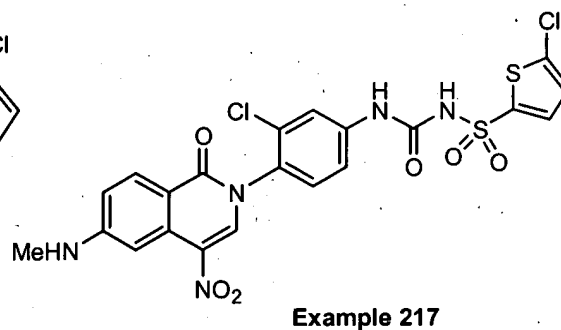
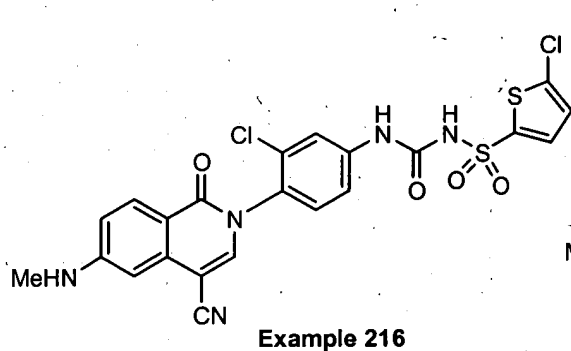
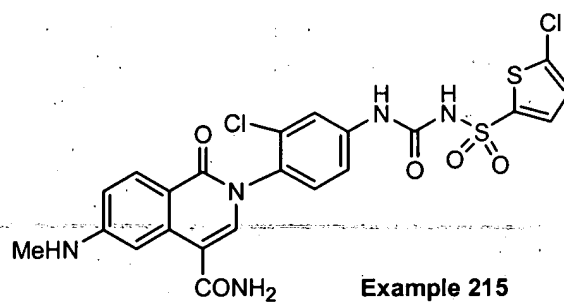
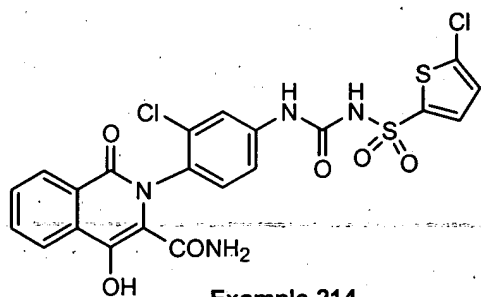


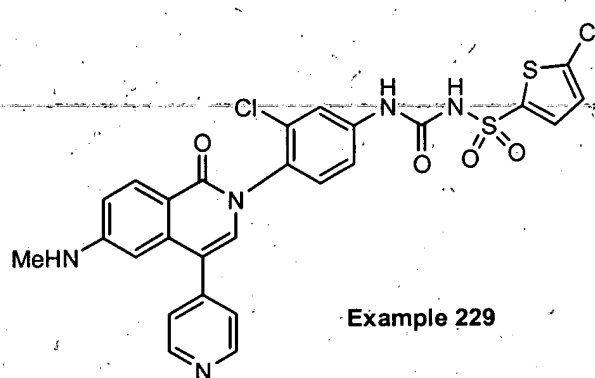
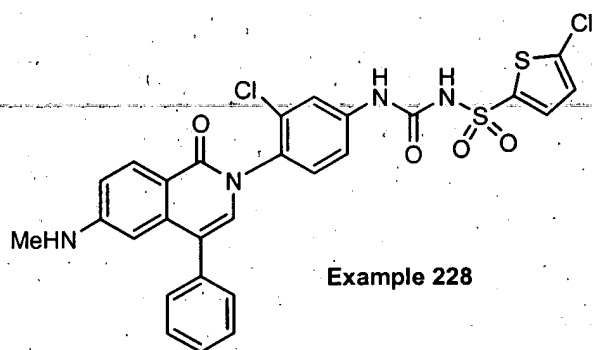
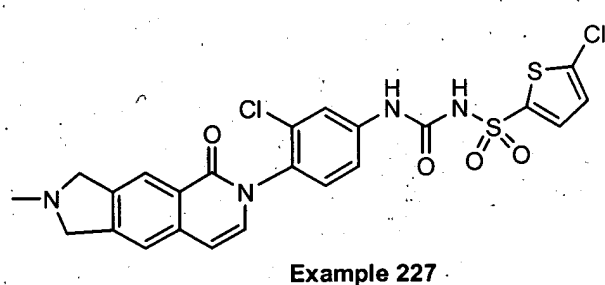
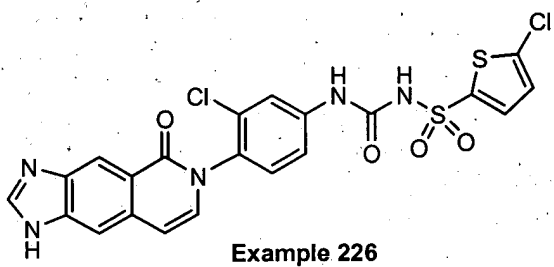
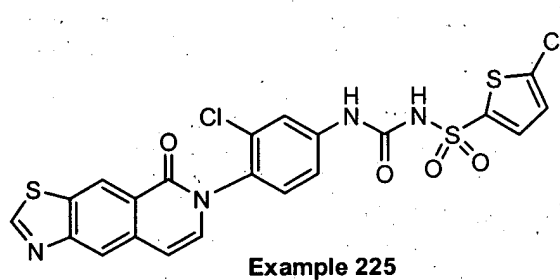
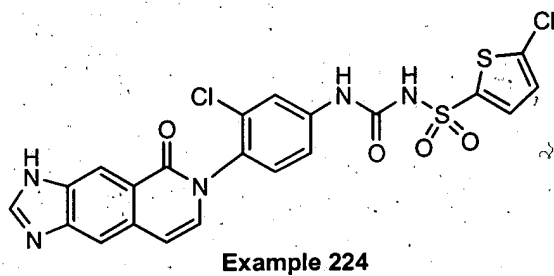
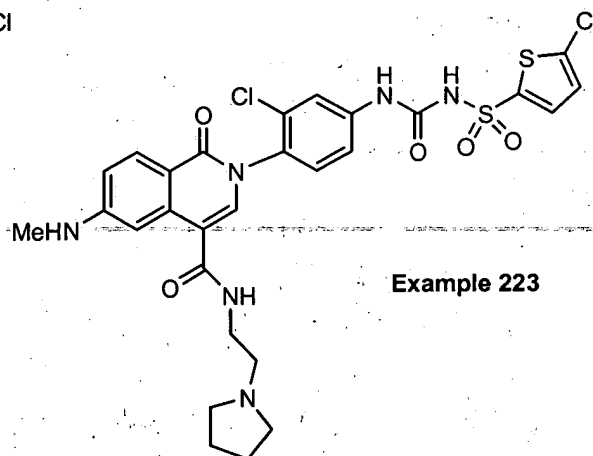
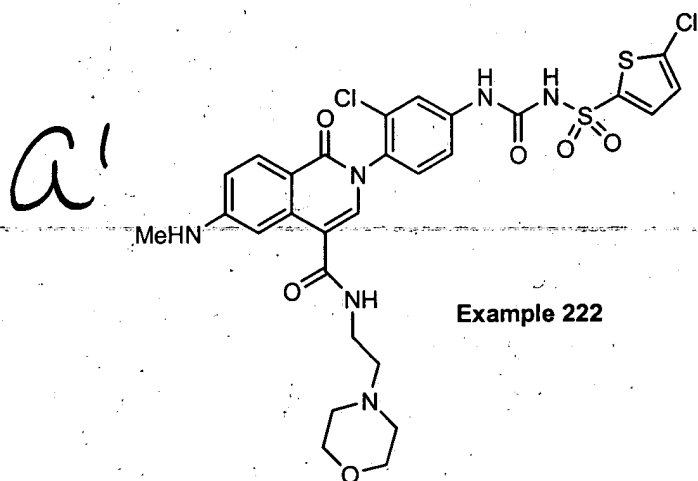
Example 117



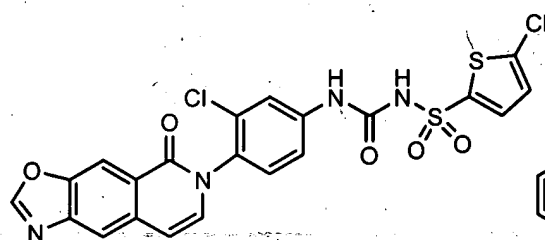


a'

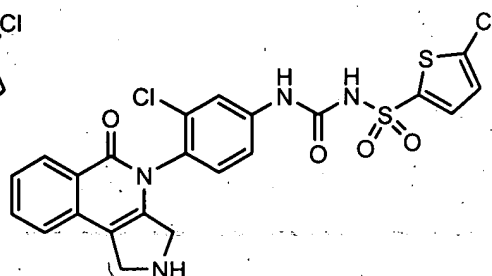




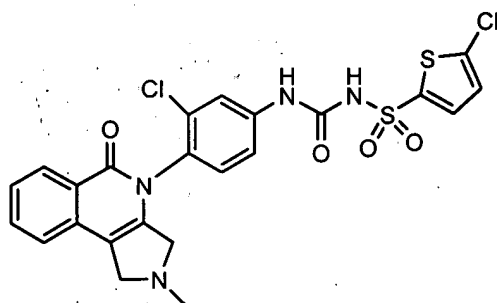
a'



Example 230

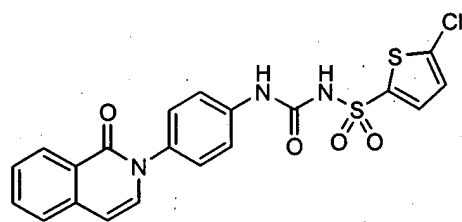


Example 231

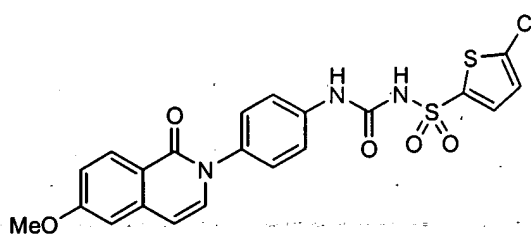


Example 232

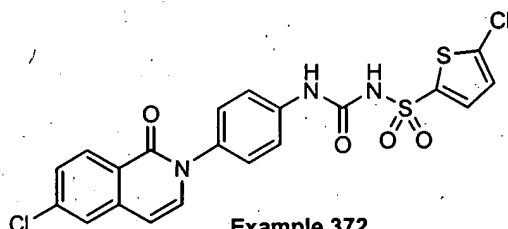
Q1



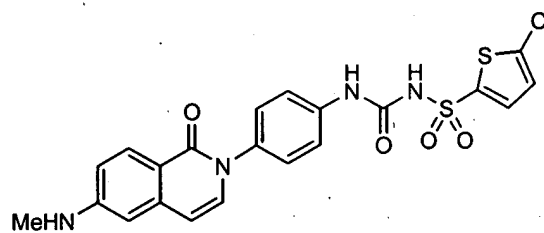
Example 370



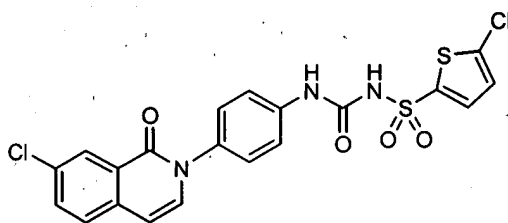
Example 371



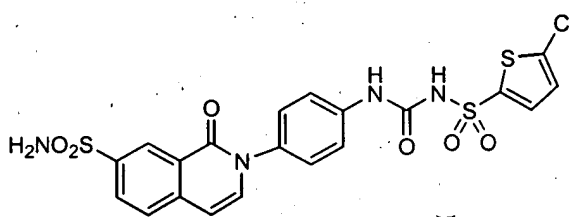
Example 372



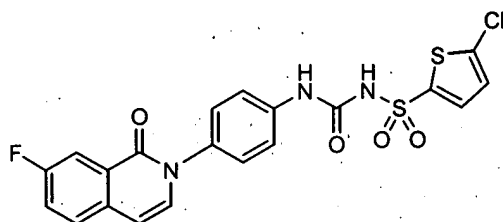
Example 373



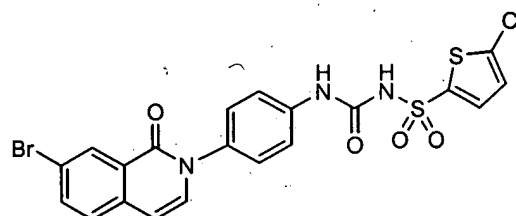
Example 374



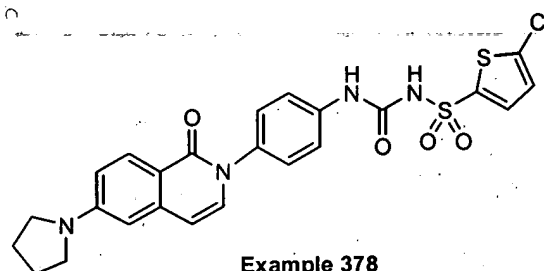
Example 375



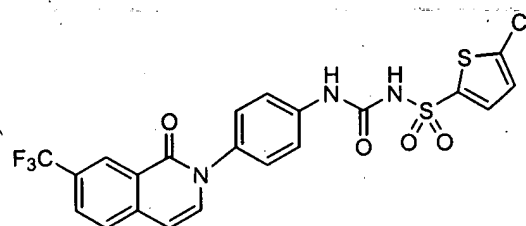
Example 376



Example 377

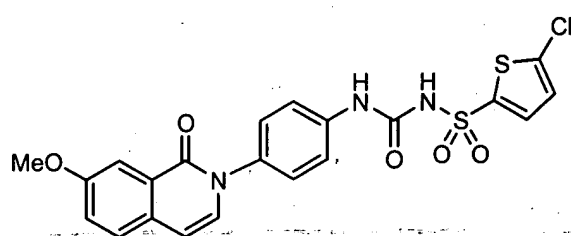


Example 378

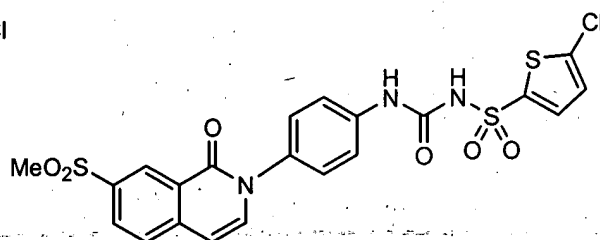


Example 379

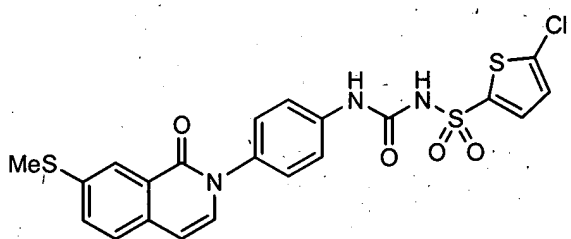
a'



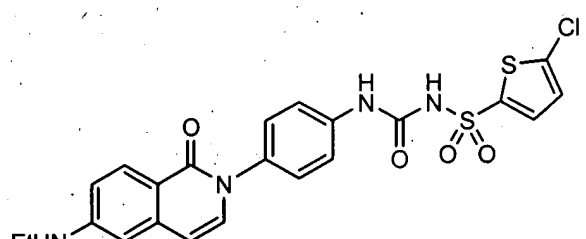
Example 380



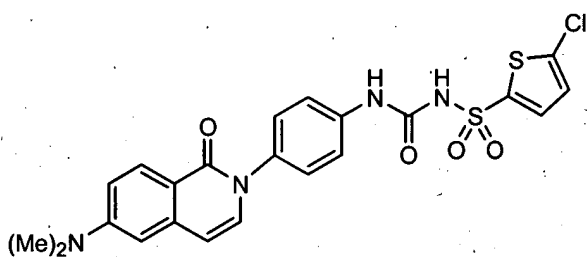
Example 381



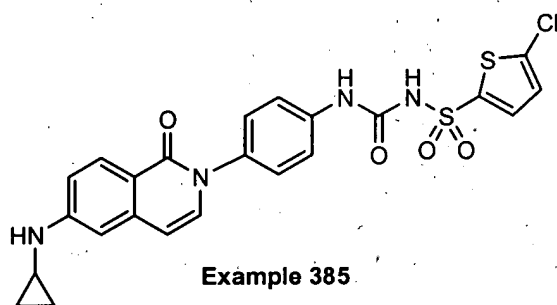
Example 382



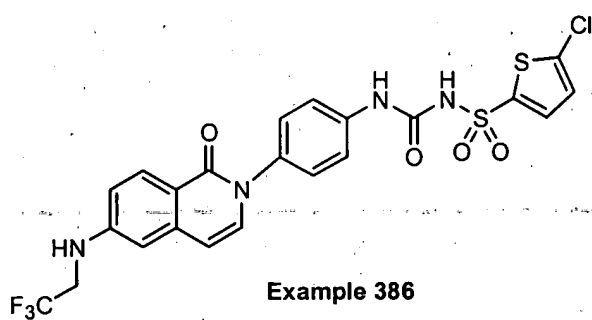
Example 383



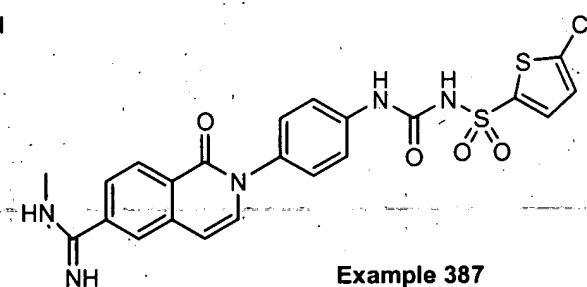
Example 384



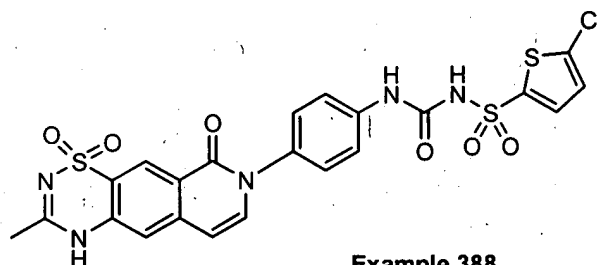
Example 385



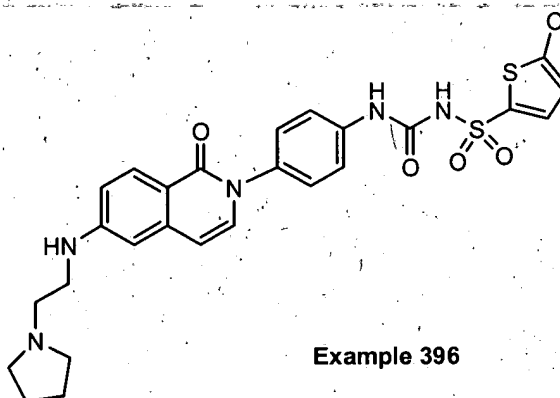
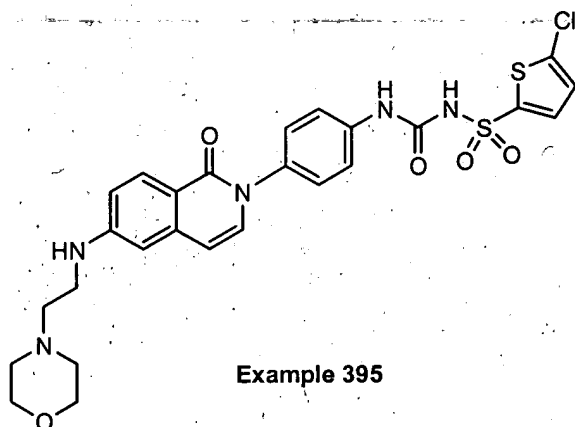
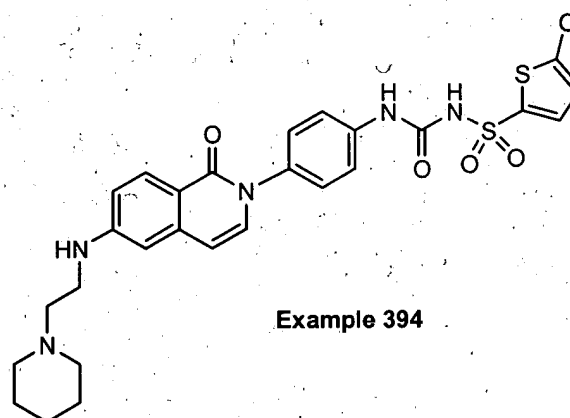
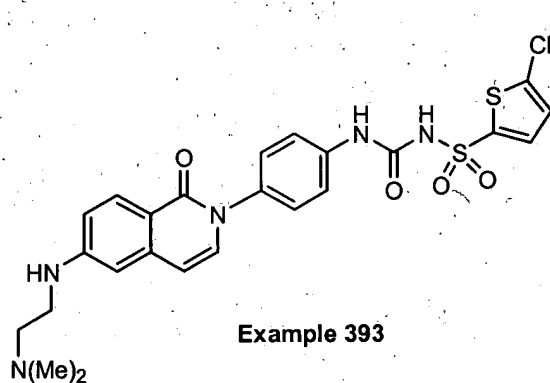
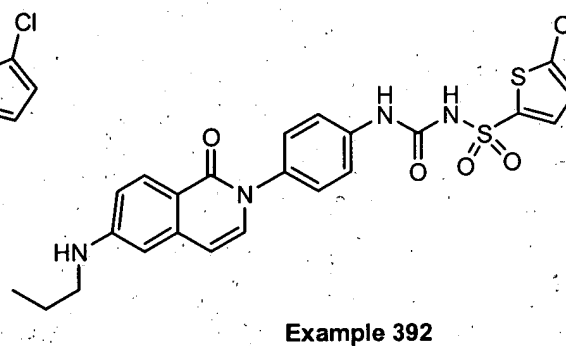
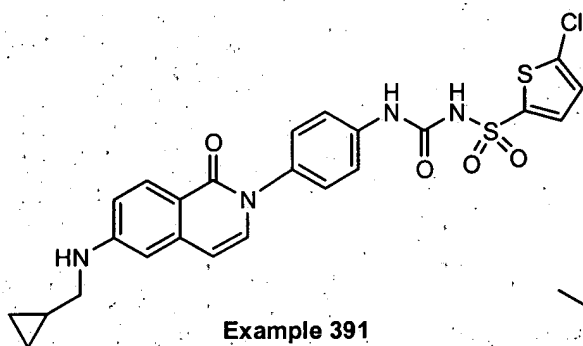
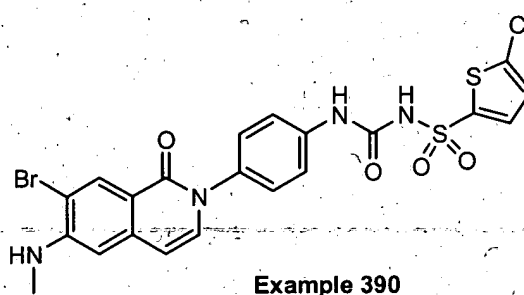
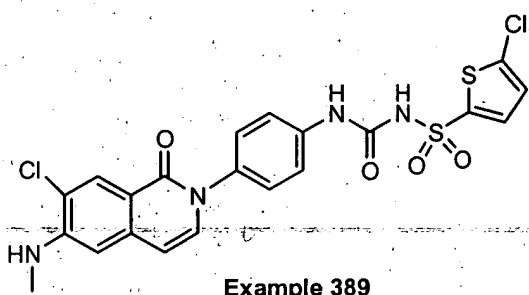
Example 386



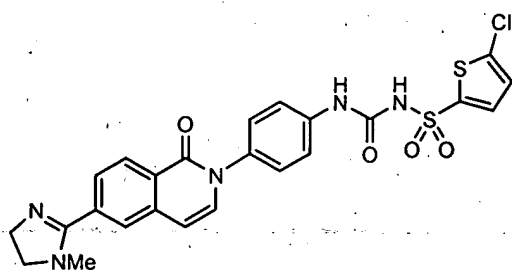
Example 387



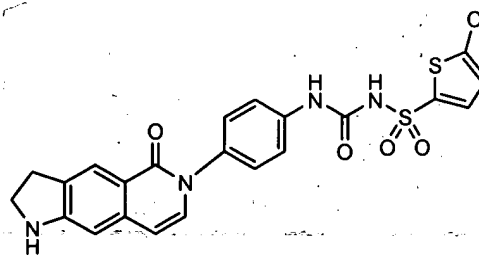
Example 388



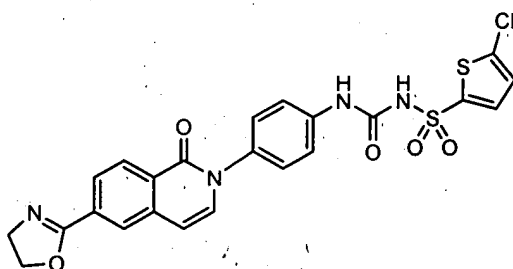
a!



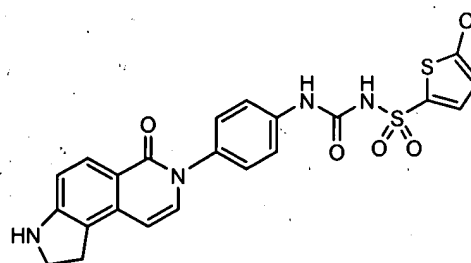
Example 397



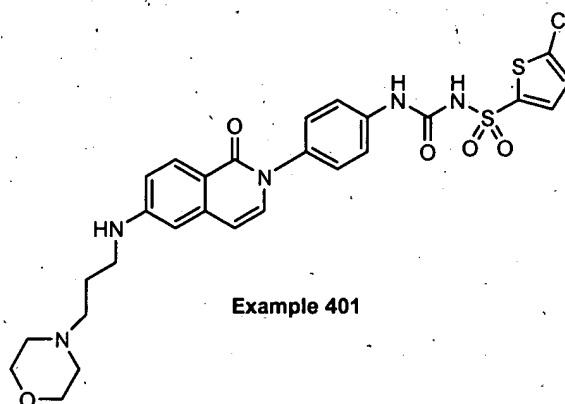
Example 398



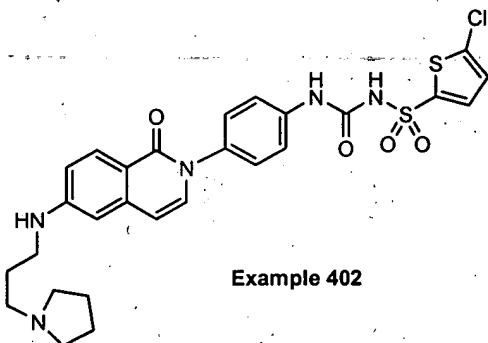
Example 399



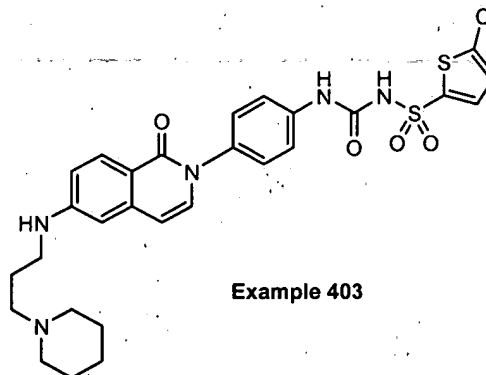
Example 400



Example 401

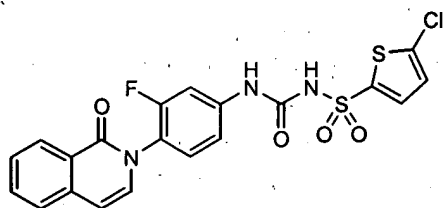


Example 402

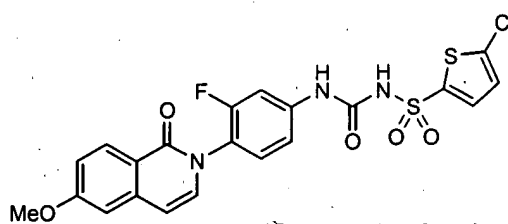


Example 403

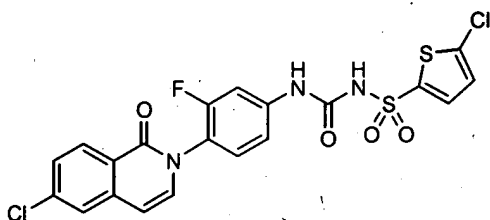
a!



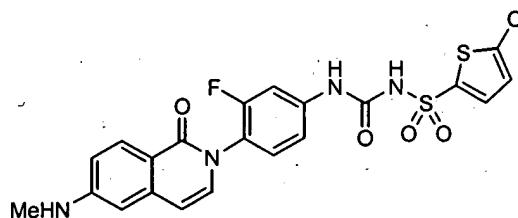
Example 404



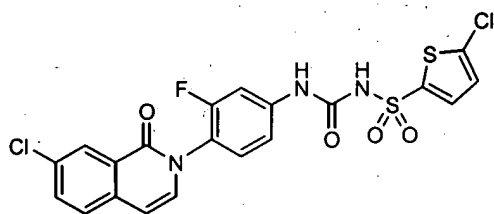
Example 405



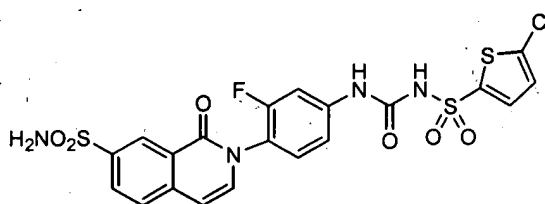
Example 406



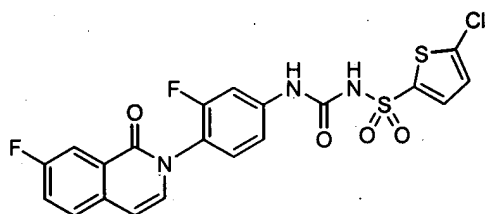
Example 407



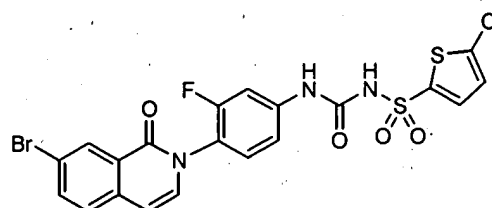
Example 408



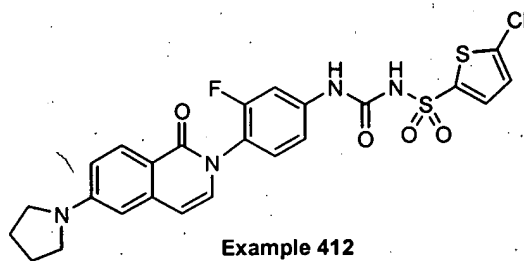
Example 409



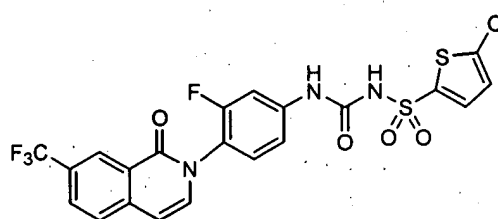
Example 410



Example 411

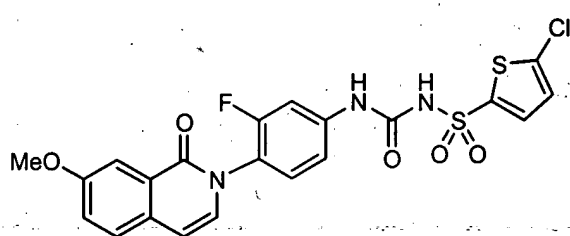


Example 412

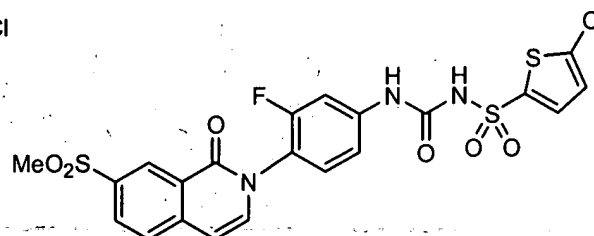


Exempl 413

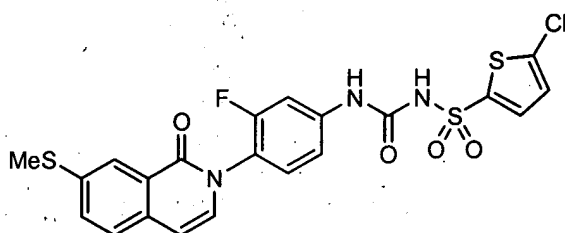




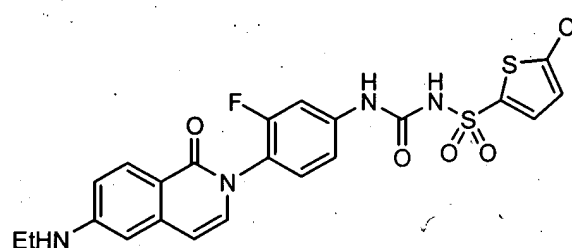
Example 414



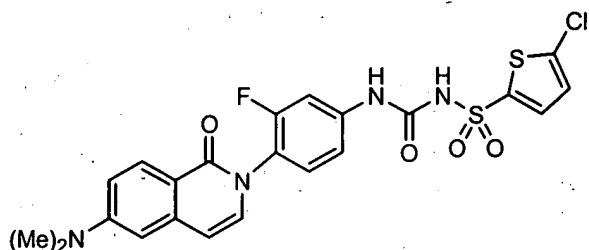
Example 415



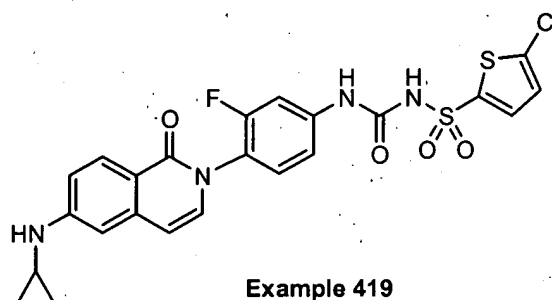
Example 416



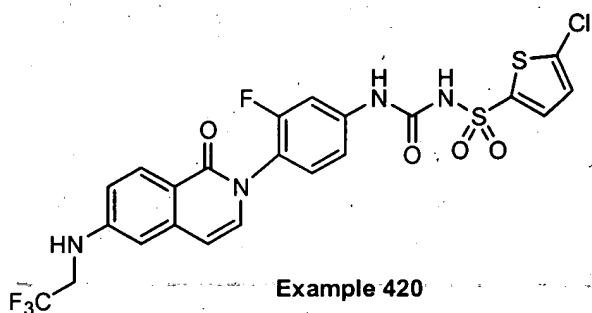
Example 417



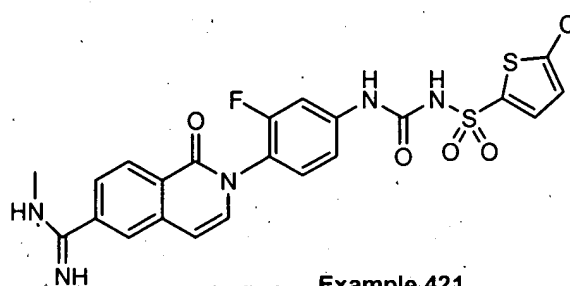
Example 418



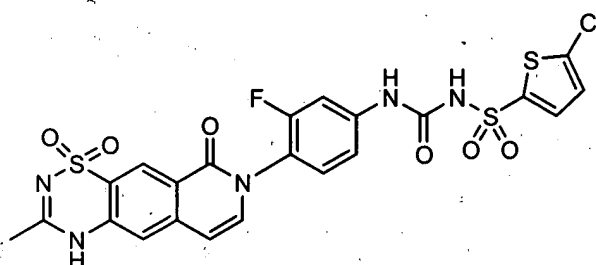
Example 419



Example 420

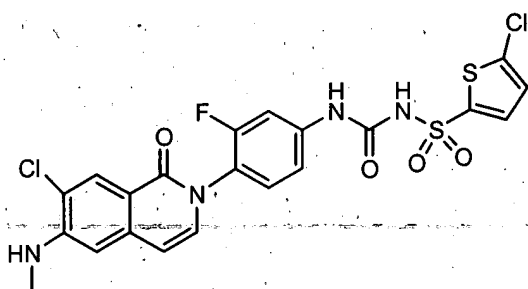


Example 421

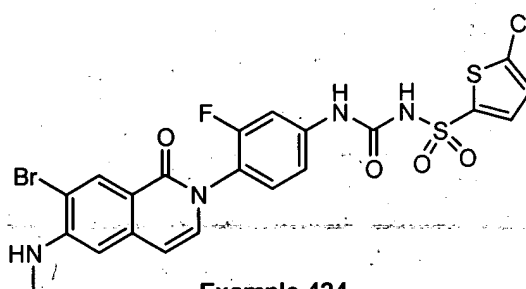


Exempl 422

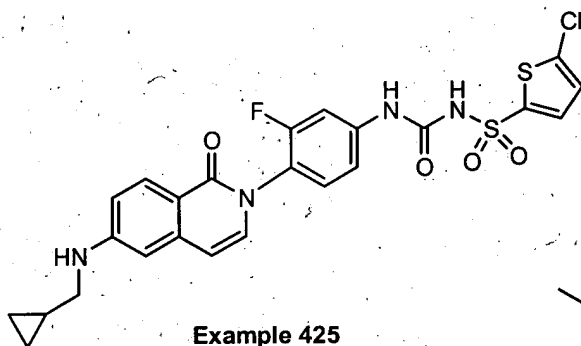
ai



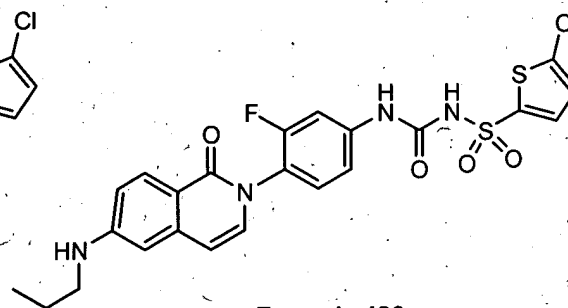
Example 423



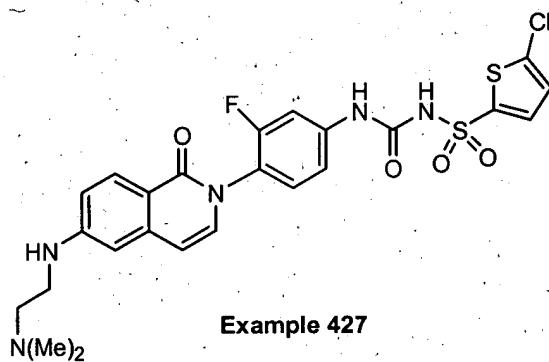
Example 424



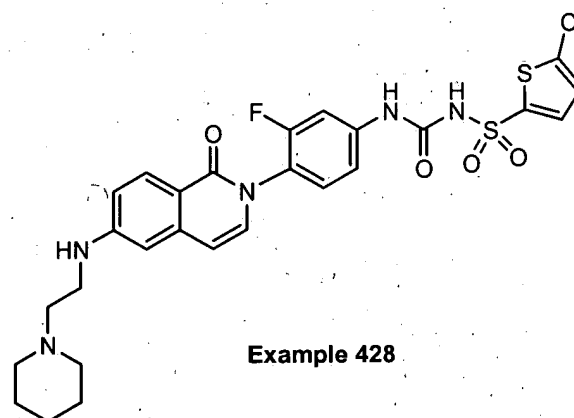
Example 425



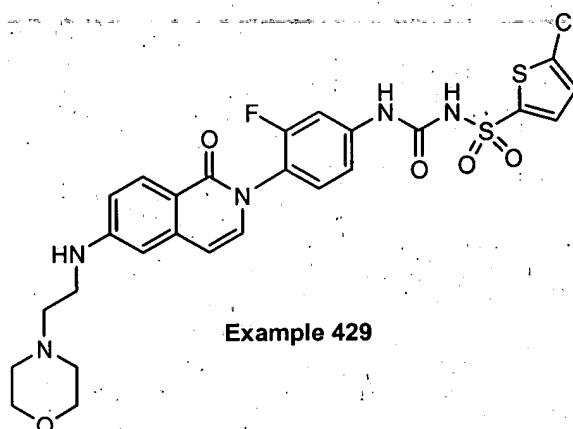
Example 426



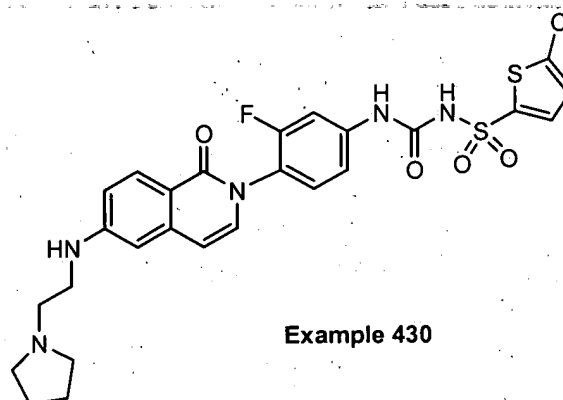
Example 427



Example 428

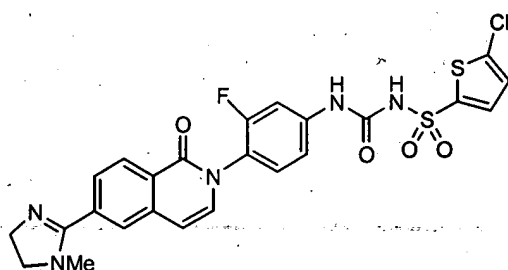


Example 429

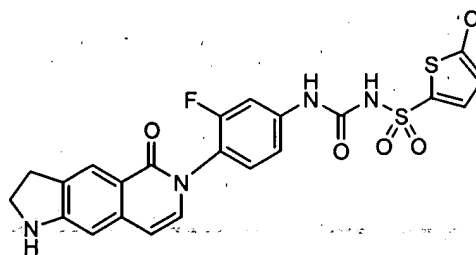


Example 430

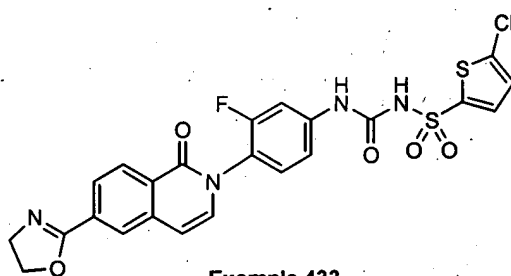
Q1



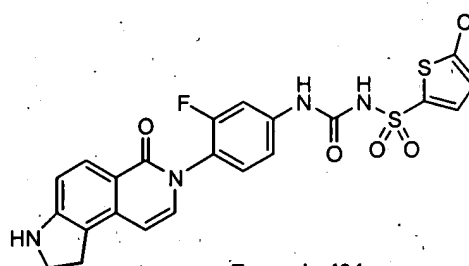
Example 431



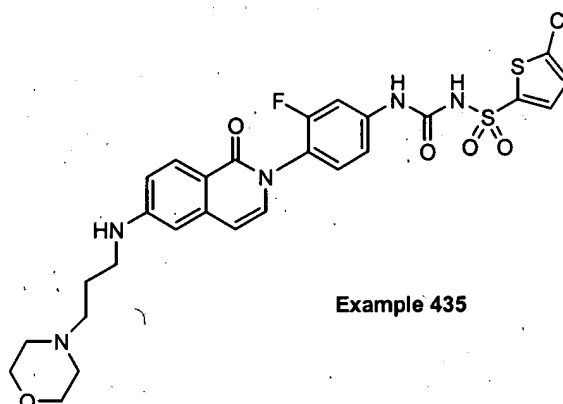
Example 432



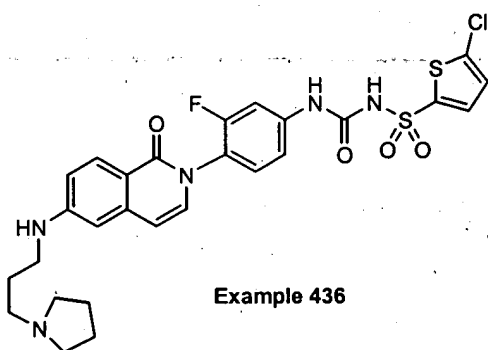
Example 433



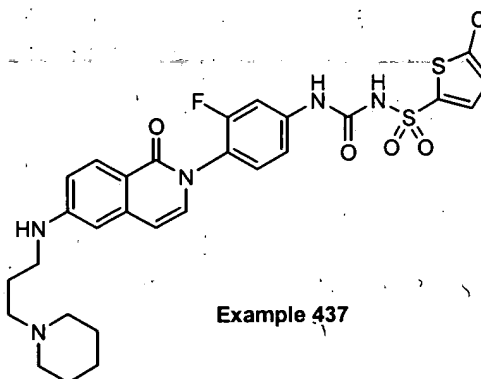
Example 434



Example 435

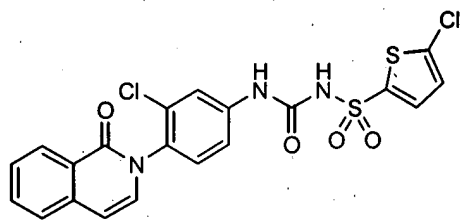


Example 436

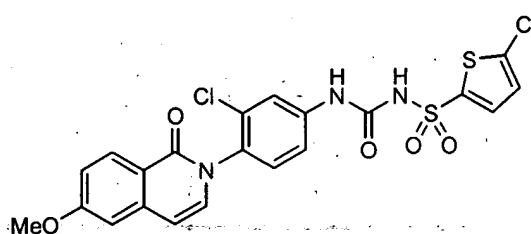


Example 437

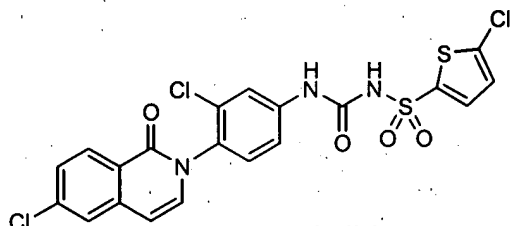
a'



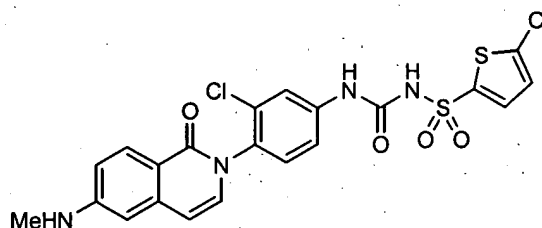
Example 472



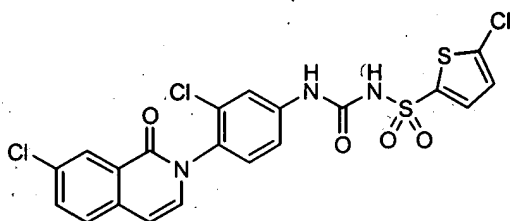
Example 473



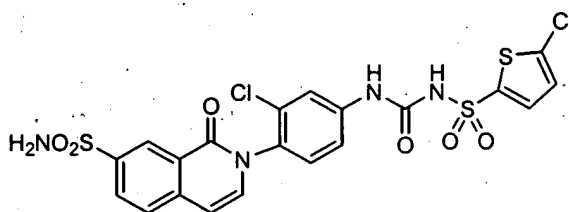
Example 474



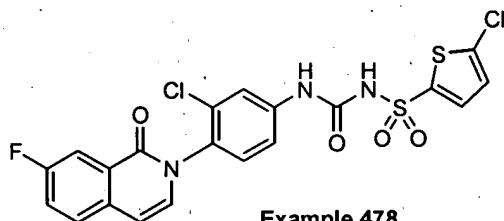
Example 475



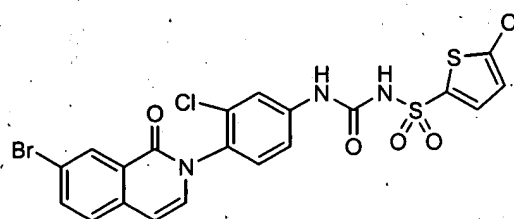
Example 476



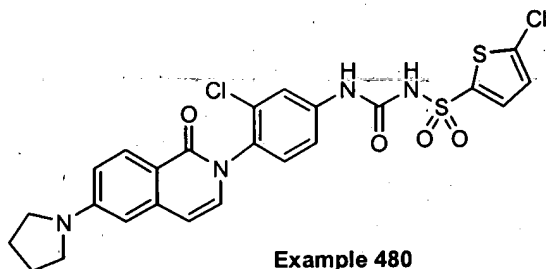
Example 477



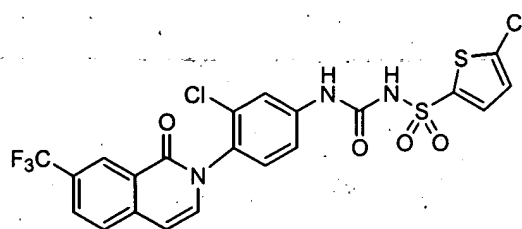
Example 478



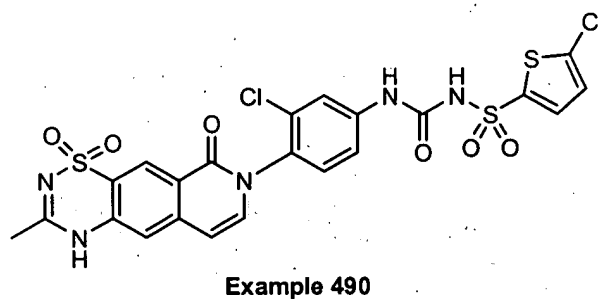
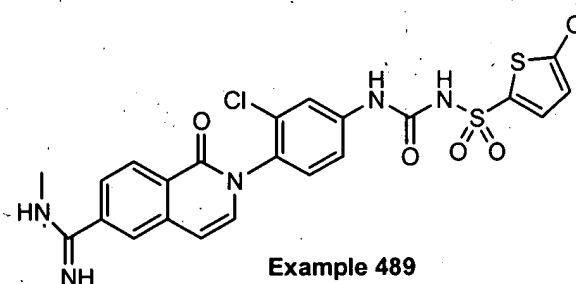
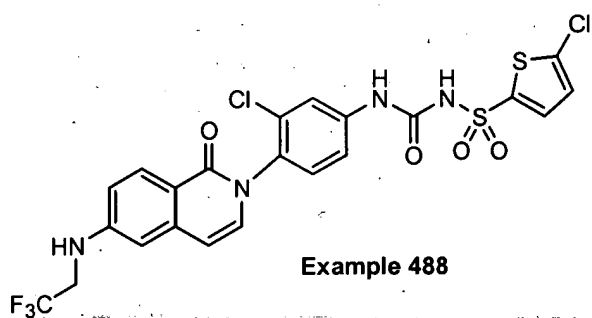
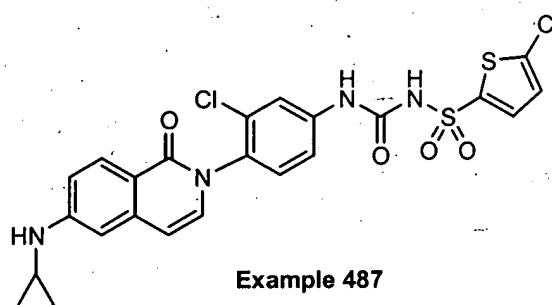
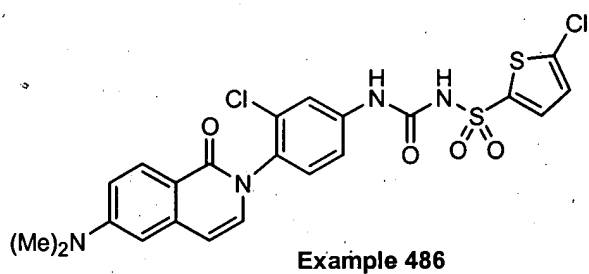
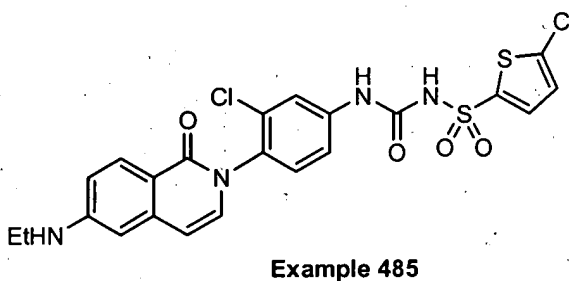
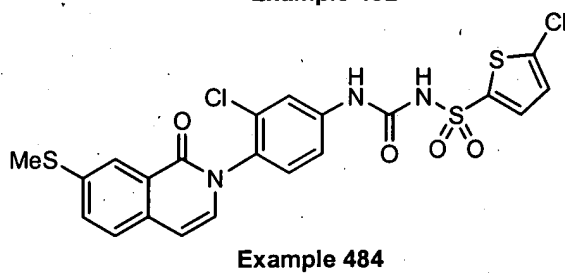
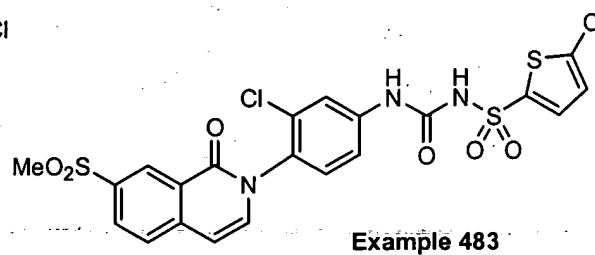
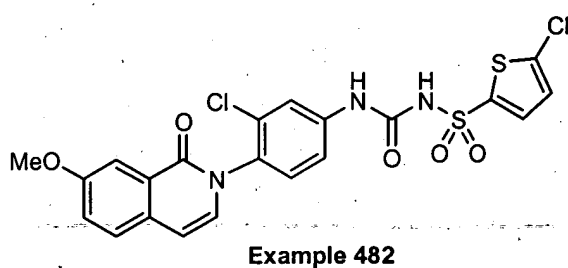
Example 479

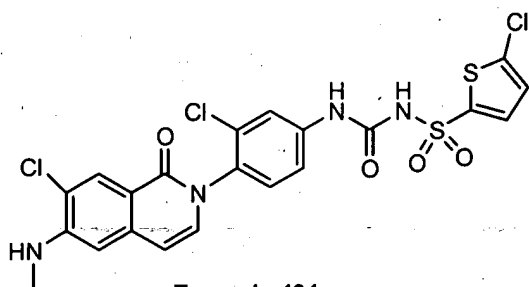


Example 480

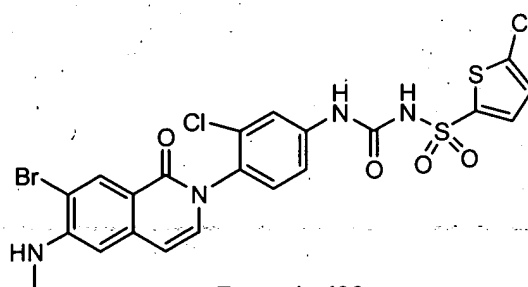


Examl 481

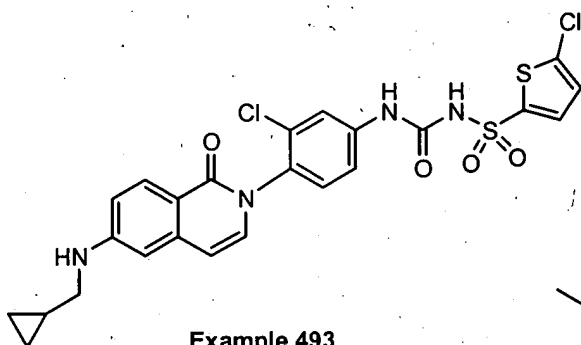




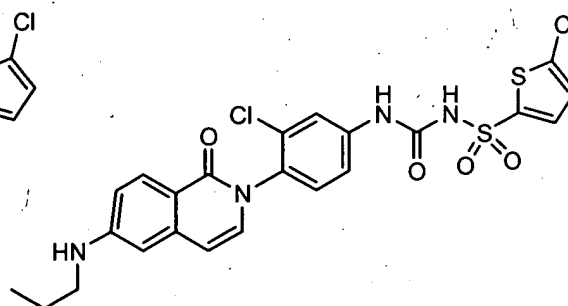
Example 491



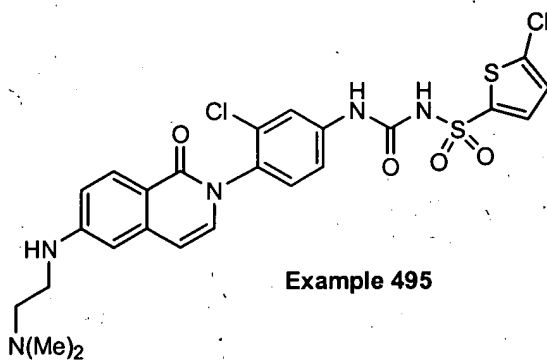
Example 492



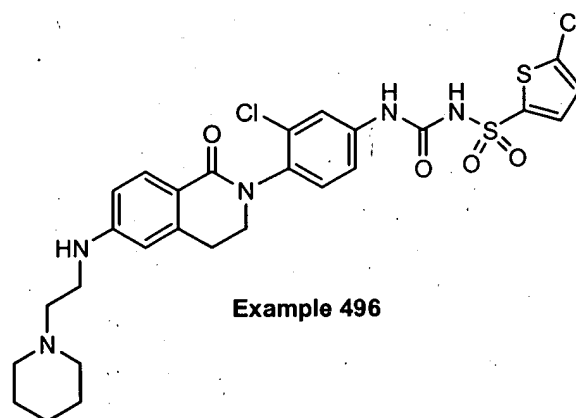
Example 493



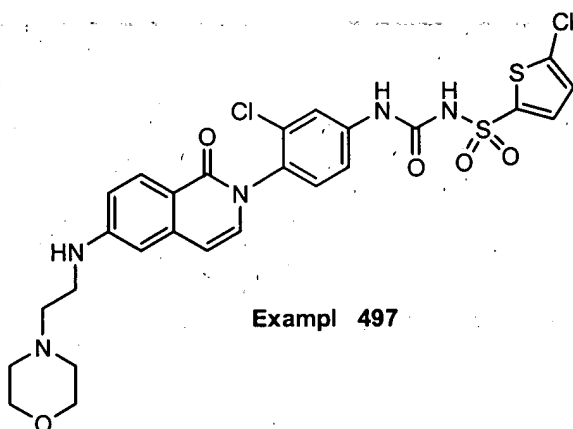
Example 494



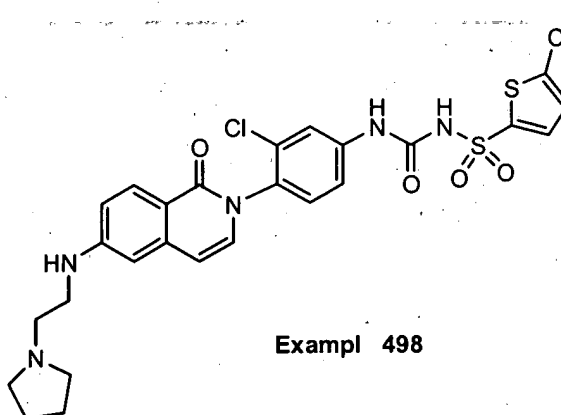
Example 495



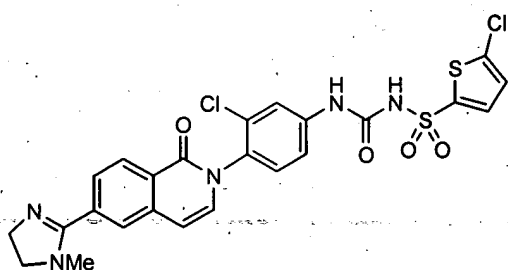
Example 496



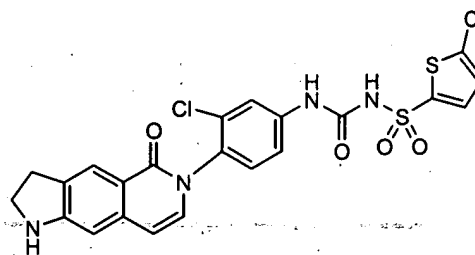
Exempl 497



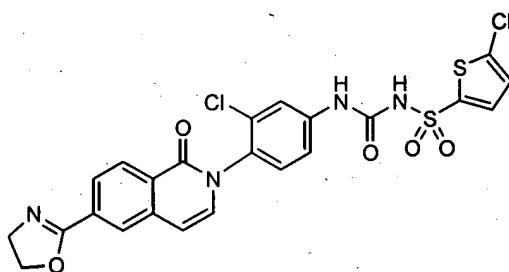
Exempl 498



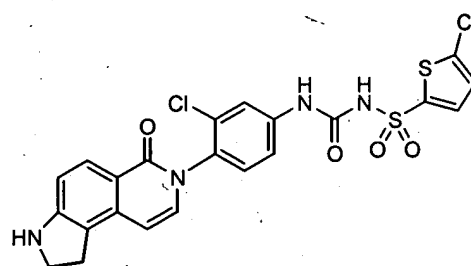
Example 499



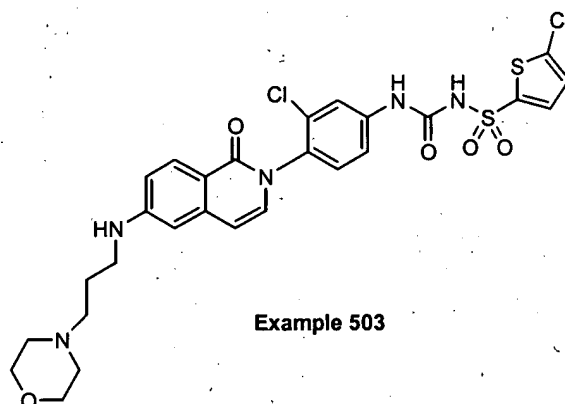
Example 500



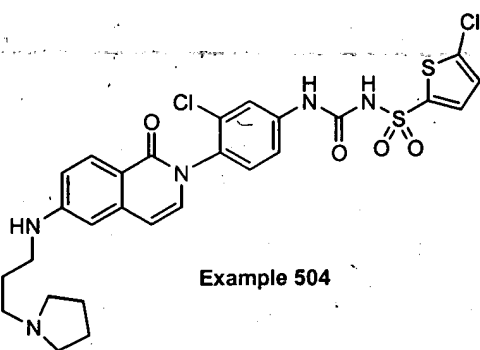
Example 501



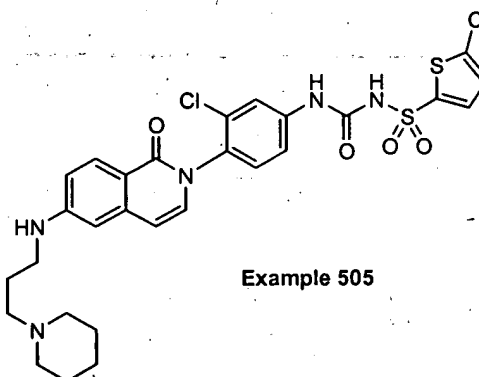
Example 502



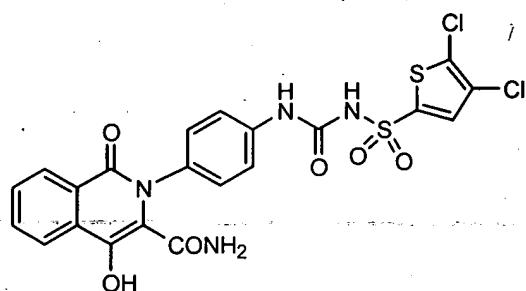
Example 503



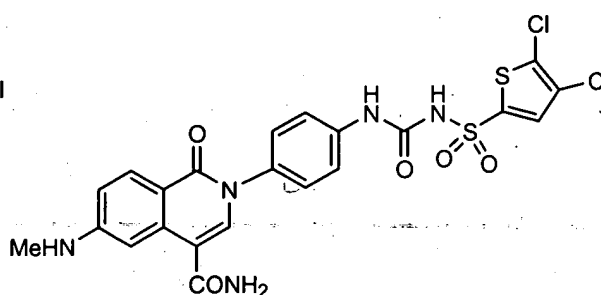
Example 504



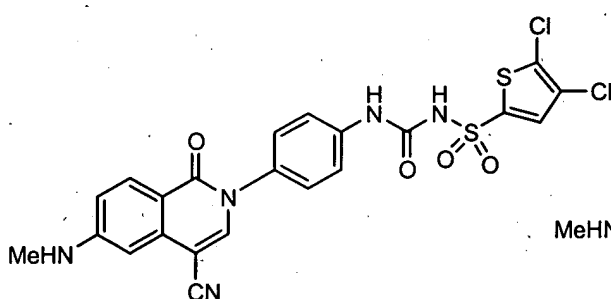
Example 505



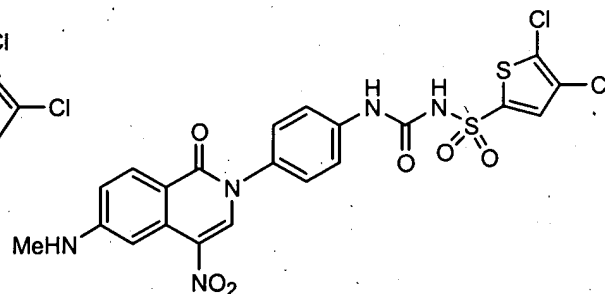
Example 769



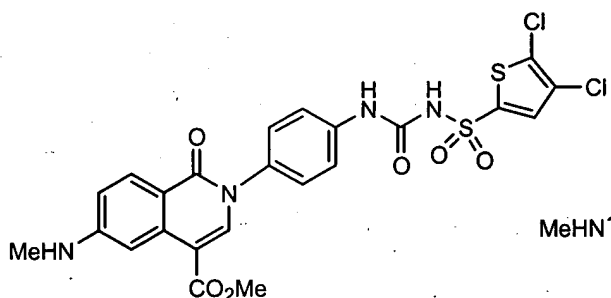
Example 770



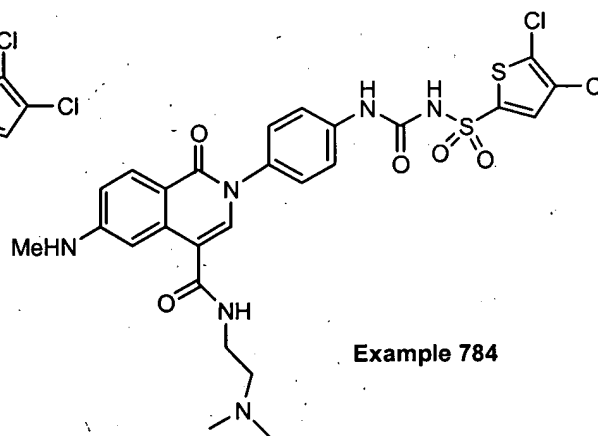
Example 781



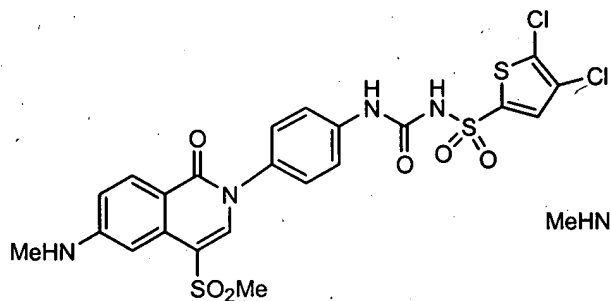
Example 782



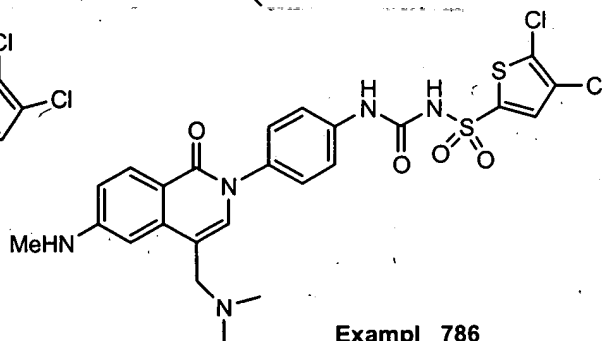
Example 783



Example 784

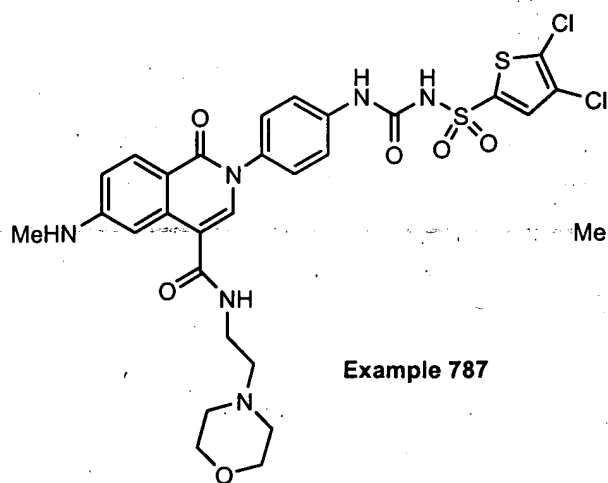


Example 785

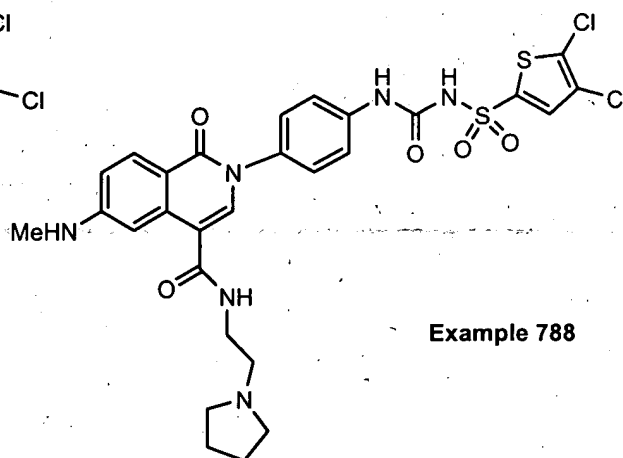


Examl 786

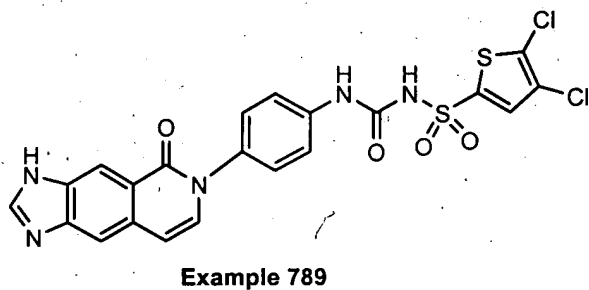




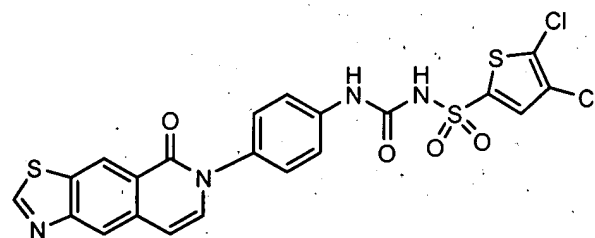
Example 787



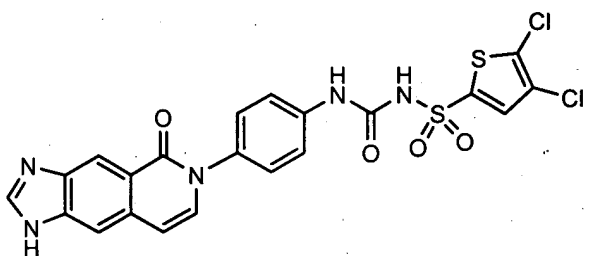
Example 788



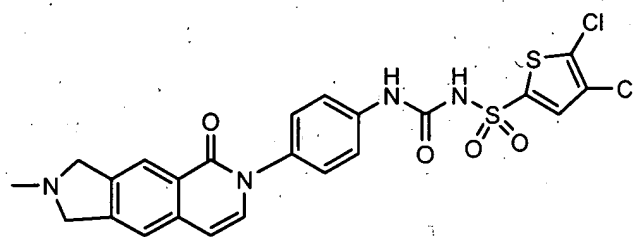
Example 789



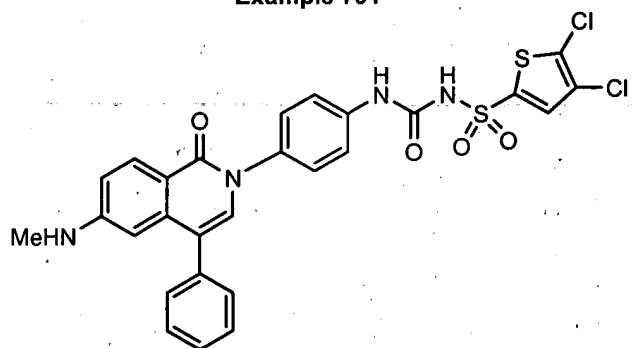
Example 790



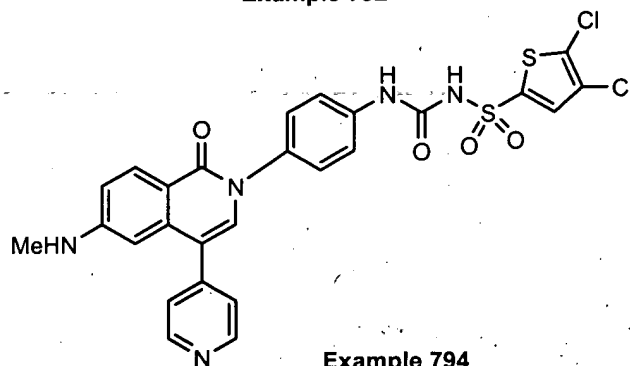
Example 791



Example 792

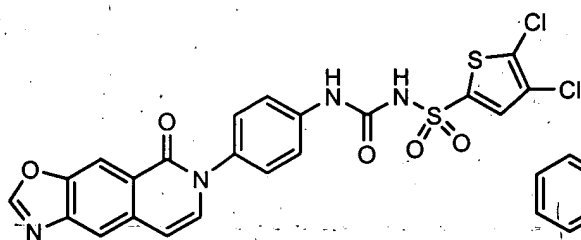


Example 793

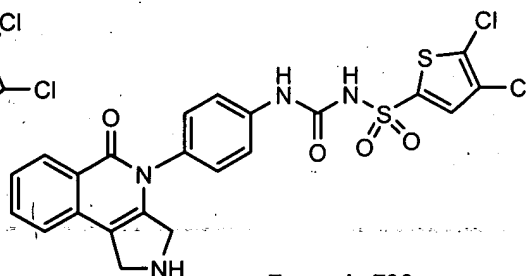


Example 794

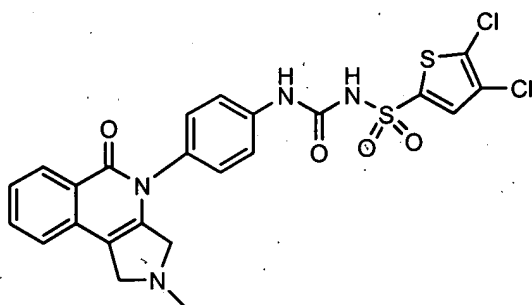
a'



Example 795

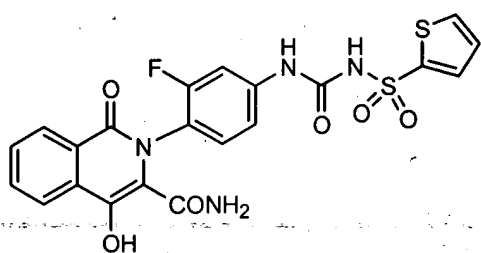


Example 796

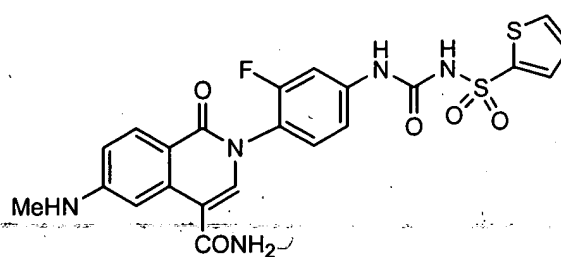


Example 797

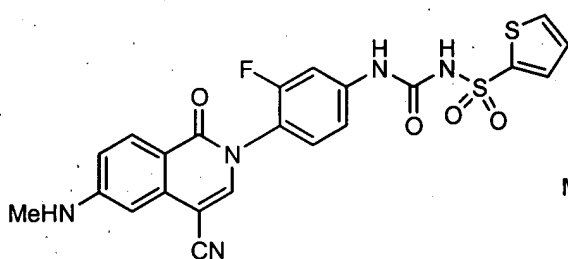
a'



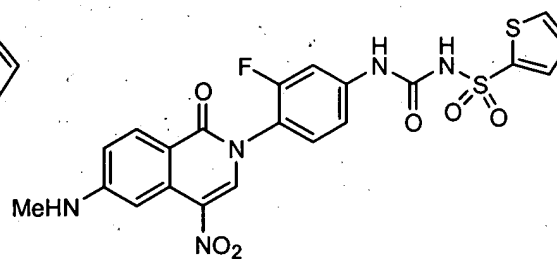
Example 833



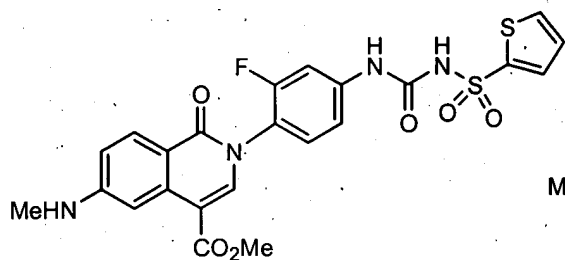
Example 834



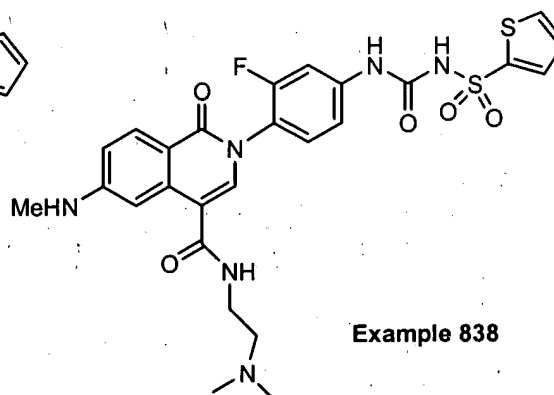
Example 835



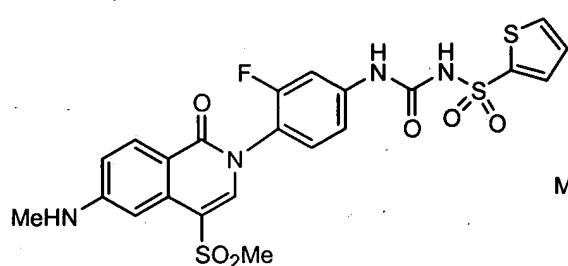
Example 836



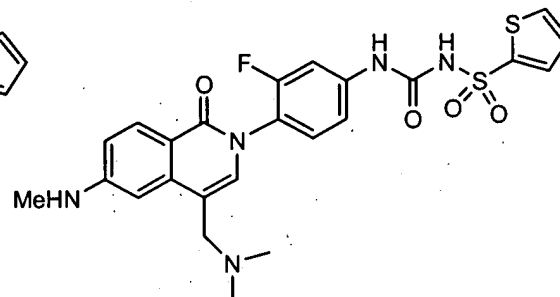
Example 837



Example 838



Example 839

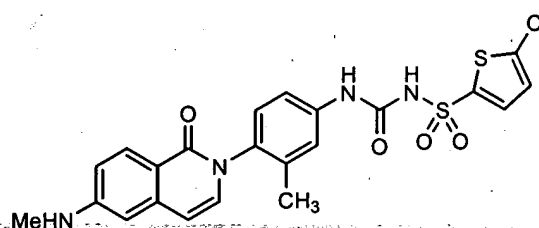


Example 840

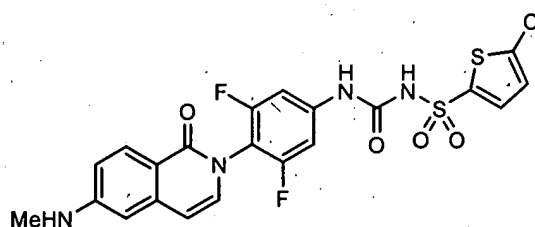




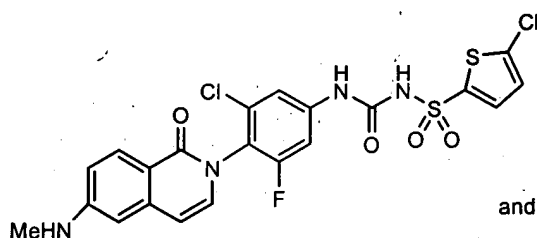
### Example 933



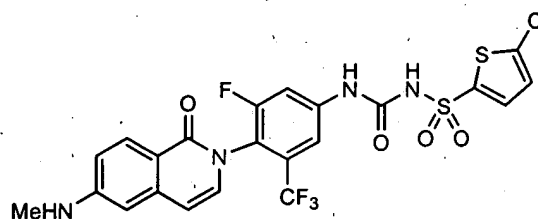
### Example 934



### Example 936



and



### Example 938

28

### Example 937

- 1 26. (New) A pharmaceutical composition for treating thrombosis in a mammal  
2 comprising a therapeutically effective amount of a compound according to claim 23, or a  
3 pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 1 27. (New) A pharmaceutical composition of claim 26, wherein said  
2 therapeutically effective amount is an amount effective to inhibit platelet aggregation in the  
3 mammal.
- 1 28. (New) A pharmaceutical composition of claim 27, wherein said platelet  
2 aggregation is ADP-dependent aggregation.
- 1 29. (New) A pharmaceutical composition of claims 26 and 28, wherein said  
2 mammal is a human.

a'

2 30. (New) A pharmaceutical composition of claim 26, wherein said compound  
is an effective inhibitor of [<sup>3</sup>H]2-MeS-ADP binding to platelet ADP receptors.

1 31. (New) A pharmaceutical composition for treating thrombosis in a mammal  
2 comprising a therapeutically effective amount of a compound according to claims 24-25, or a  
3 pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

1 32. (New) A pharmaceutical composition of claim 31, wherein said  
2 therapeutically effective amount is an amount effective to inhibit platelet aggregation in the  
3 mammal.

1 33. (New) A pharmaceutical composition of claim 32, wherein said platelet  
2 aggregation is ADP-dependent aggregation.

1 34. (New) A pharmaceutical composition of claims 30 and 33, wherein said  
2 mammal is a human.

1 35. (New) A pharmaceutical composition of claim 31, wherein said compound  
2 is an effective inhibitor of [<sup>3</sup>H]2-MeS-ADP binding to platelet ADP receptors.

1 36. (New) A method for treating thrombosis in a mammal comprising the step  
2 of administering to a mammal a therapeutically effective amount of a compound of claim 23 or a  
3 pharmaceutically acceptable salt thereof.

1 37. (New) A method of claim 36, wherein said mammal is a human.

1 38. (New) A method of claim 36, wherein said thrombosis is indicated by at  
2 least one selected from the group consisting of acute myocardial infarction, unstable angina,  
3 chronic stable angina, transient ischemic attacks, strokes, peripheral vascular disease,  
4 preeclampsia/eclampsia, deep venous thrombosis, embolism, disseminated intravascular  
5 coagulation and thrombotic cytopenic purpura, thrombotic and restenotic complications  
6 following invasive procedures resulting from angioplasty, carotid endarterectomy, post CABG

7 (coronary artery bypass graft) surgery, vascular graft surgery, stent placements and insertion of  
8 endovascular devices and protheses.

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